

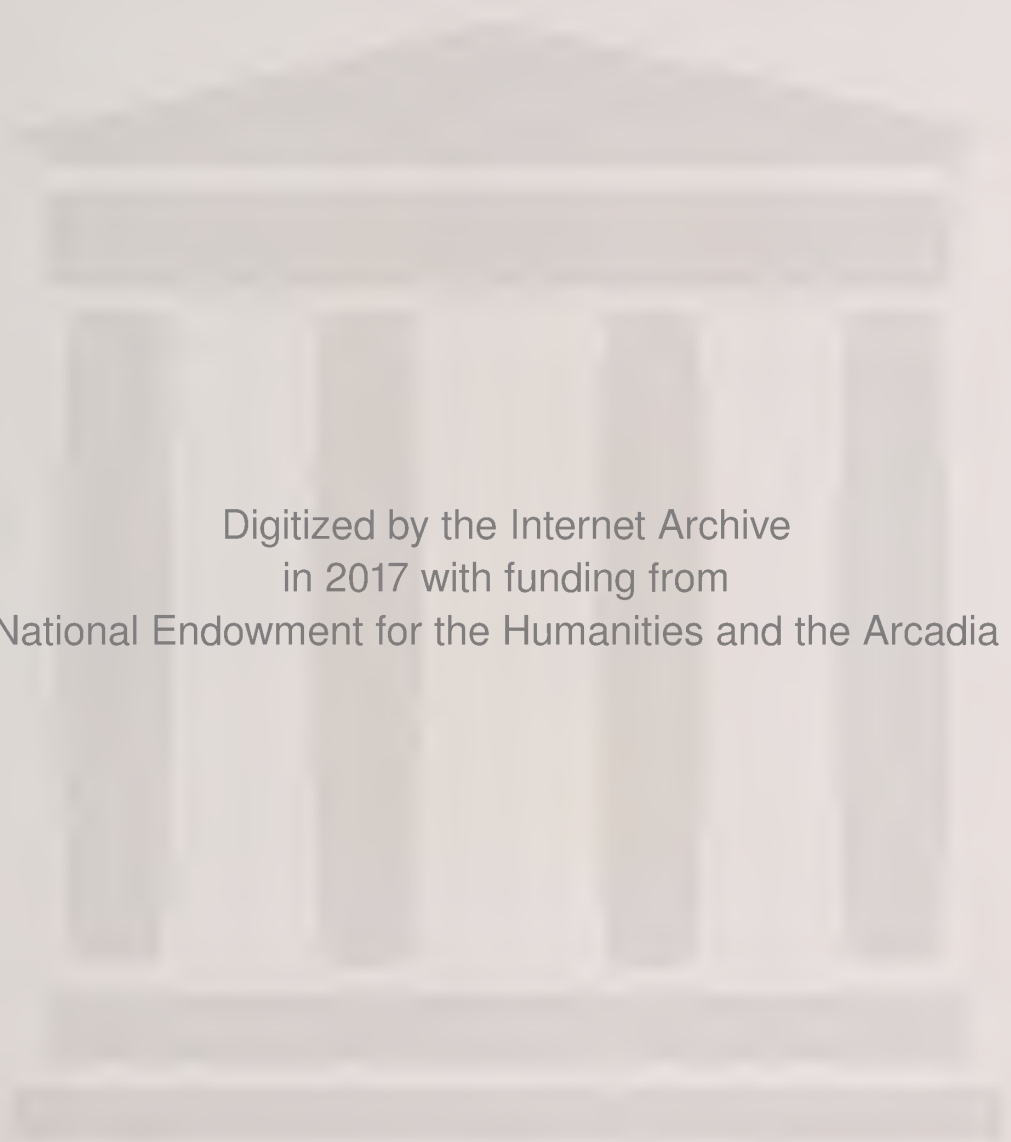
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January 1973
Vol. 56, No. 1

BALCONY

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Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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Rhode Island Medical Journal

JANUARY, 1973
NEW YORK ACADEMY
OF MEDICINE

VOLUME 56, NO. 1

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COVER: Enlarged about eight times, the light images making up a brain scan become an interesting pattern... film courtesy the Brain Scan Laboratory, Moshassuck Medical Center, Bertram Selverstone, M.D., Director. See pages 17 and 21.

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Sally's back in sew biz! After an arthritic flare-up.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hematology, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, especially those responsive to routine measures, contraindications or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the lowest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Sublingual capsules for tablets if dyspeptic symptoms.

Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions, stomatitis, or blood dyscrasias; dyspepsia, epigastric symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Contraindications: Acute gouty arthritis, rheumatoid arthritis, ankylosing spondylitis.

Indications: Children 14 years or less; senile patients with history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, extent of concomitant diseases, and concurrent potent therapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable risks against potential risk of severe, even fatal, results. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias,

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including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylureas, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmologic examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug. **Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis,

epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement (B)98-146-070-G

Serious side effects do occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions.

For complete details, including dosage, please see full prescribing information.

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MEDICAL EVENTS CALENDAR

Saturday, February 10, 1973

MECHANISM OF ORAL HYPOGLYCEMIC AGENTS

Frank Fisher Davidoff, M.D.

Assistant Professor of Medicine, Harvard Medical
School, Director, Diabetes Unit, Beth Israel Hospital

Rhode Island Hospital

George Bldg. Auditorium

10:00 a.m.

Wednesday, February 14, 1973

**INDICATIONS FOR USE OF DIFFERENT MODALITIES IN
PHYSICAL MEDICINE**

Cairbre B. McCann, M.D.

Director of Rehabilitation Medicine, Rhode Island
Hospital

Rhode Island Hospital

8th Floor Conference Room

1:00 p.m.

Friday, February 16, 1973

CYCLIC AMP, PROTEIN KINASES, AND NEUROTRANSMISSION

Dr. Paul Greengard

Department of Pharmacology, Yale University
New Haven, Connecticut.

Brown University

Barus & Holley 168

4:00 p.m.

Saturday, February 17, 1973

HORMONAL ASPECTS OF CALCIUM HOMEOSTASIS

Louis M. Sherwood, M.D.

Professor of Medicine, The University of Chicago;
Physician-in-Chief and Chairman, Department of Medi-
cine, Michael Reese Hospital, Chicago, Illinois

Rhode Island Hospital

George Bldg. Auditorium

10:00 a.m.

Wednesday, February 21, 1973

LOCAL & NERVE BLOCK ANESTHESIA IN ORTHOPEDICS

Charles V. Cox, M.D.

Anesthesia Staff, Rhode Island Hospital

Rhode Island Hospital

8th Floor Conference Room

1:00 p.m.

MEDICAL EVENTS CALENDAR

Saturday, February 24, 1973

BURN WOUND SEPSIS

Thomas J. Krizek, M.D.

Associate Professor of Surgery (Plastic), Yale University School of Medicine, Chief, Division of Plastic Surgery, Yale New Haven Medical Center.

Rhode Island Hospital

George Bldg. Auditorium

10:00 a.m.

Tuesday, February 27, 1973

REVIEW OF ARTICLES PRESENTED AT AAA MEETING

Division of Allergy, Rhode Island Hospital

Rhode Island Hospital

Potter I Conference Room

8:30 p.m.

Wednesday, February 28, 1973

VASCULAR PROBLEMS OF LOWER EXTREMITIES

William P. Corvese, M.D.

Surgical Staff, Rhode Island Hospital

Rhode Island Hospital

8th Floor Conference Room

1:00 p.m.

Saturday, March 3, 1973

SHOCK AND SEPSIS IN SURGICAL PRACTICE

Lloyd D. MacLean, M.D.

Professor of Surgery, McGill University; Surgeon-in-Chief, Royal Victoria Hospital, Montreal, Quebec

Rhode Island Hospital

George Bldg. Auditorium

10:00 a.m.

Wednesday, March 7, 1973

ANATOMY OF MENISCI & LIGAMENTS OF THE KNEE JOINTS

A. A. Savastano, M.D.

Surgeon-in-Chief, Department of Orthopedic Surgery and Fractures, Rhode Island Hospital

Rhode Island Hospital

8th Floor Conference Room

1:00 p.m.

Saturday, March 10, 1973

HEPATIC TRAUMA AND TUMORS

Seymour I. Schwartz, M.D.

Professor of Surgery, The University of Rochester, School of Medicine and Dentistry

Rhode Island Hospital

George Bldg. Auditorium

10:00 a.m.





BROWN UNIVERSITY
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Providence, Rhode Island 02912
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A Message from the Dean

CASE HISTORIES OF TEN NEW MEDICAL SCHOOLS*

In the decade from 1961 to 1971, twenty-two new medical schools enrolled their first class, bringing the total number of schools in operation in the United States to 108. This quantum jump is even more impressive when contrasted with the previous period. During the four decades between 1920 and 1960, there was no concerted effort to increase the number of medical schools: eighty-six were in operation at the beginning of that period, and the same number prevailed at the end. (However, sixteen schools had been closed and replaced by more viable institutions.)

The turning point was the publication in 1959 of the report of a Surgeon General's Consultant Group on Medical Education "Physicians for a Growing America". This report brought forcefully to the attention of the public and legislators the critical need for an increased production of physicians. From 1920 to 1960, the number of American graduates had risen, through expanding enrollment in existing schools, from 3,000 to about 7,000. The 1959 report estimated that in order to maintain a constant physician-population ratio, the number of graduates per year would have to be increased by 3,000 before 1975. For that purpose it suggested the annual admission of 12,000 students by the fall of 1971.

These projections have proven essentially correct. In fact enrollment in American medical schools is now 5 to 10 per cent ahead of the 1959 target. The increased opportunities for medical education in the sixties have been provided about equally by the expansion of existing schools and the development of new schools. Further increase

in the seventies is likely to come from the new schools, since many of the established ones have now reached the limit of their clinical facilities.

Vernon W. Lippard, former Dean of the Yale Medical School (and before that Dean at Columbia, Louisiana State and Virginia) has edited, on behalf of the Macy Foundation, the "Case Histories of Ten New Medical Schools". To illustrate the multicolored crop of the sixties, he has selected schools fertilized by a large, preexisting university system (California at San Diego, New York at Stony Brook, Texas at San Antonio) and schools which had to till their own soil (Arizona, Connecticut, Hershey, Toledo); schools which bloomed on a strong hospital ground (Mount Sinai in New York) and schools which germinated in the parent university (Brown and Michigan State). The Macy Foundation invited the Deans of these ten new schools to record their experience. The ten reports that comprise this volume represent as many individual approaches to the challenge of starting a medical school from scratch, and the opportunity for initiating significant innovations in curriculum, departmental structure, physical plants, university affiliation, and control of the teaching hospital. The Deans were asked to cover touchy topics, including local pressures that stimulated interest in the de-

(Continued on next page)

The Editors of the Journal offer their congratulations to Pierre M. Galletti, M.D. Ph.D. on his recent promotion to Vice President (Biology and Medicine) at Brown University. A member of the editorial board of this Journal, Doctor Galletti has also ably led the Division of Biological and Medical Sciences at Brown since 1968. The editors wish the new vice president good luck in his new position.

*Vernon W. Lippard and Elizabeth Purcell: Case Histories of Ten New Medical Schools. The Josiah Macy, Jr. Foundation, 277 Park Avenue, New York, N.Y. 10017 (December, 1972)

velopment of a medical school; foci of encouragement, opposition, or inertia; the dream of curricular planning, versus the reality of implementation; the relationship of the school to other divisions of the university, to organized medicine, to local politics, and to government agencies; the major financial turnaround of our society as "public enthusiasm for research as the prime key to human health fell off in favor of more immediate approaches".

The stresses and strains associated with the realignment of national priorities in the late sixties bore most heavily on the new medical schools. As Vernon Lippard points out, "operation of medical schools is expensive and universities were reluctant to invade their limited resources; taxpayers, foundations and private donors were called upon to

divert funds from other worthy programs. Aware of the commercial advantages and prestige associated with university medical centers, cities campaigned for them vigorously. Local medical societies in some instances felt threatened at the outset but were generally supportive. Few schools were established without controversy".

This volume is fascinating reading for those concerned with the education of physicians, and the balance of health care delivery in the years to come. It relates a chapter of our local history, and inserts in the framework of similar developments in other communities. For better or worse, the problems are pretty much the same everywhere.

PIERRE M. GALLETTI, M.D., PH.D.
Vice President
(Biology and Medicine)

This column is intended as a channel for information in medical education that may affect the practicing professional community of Rhode Island and as a place to describe current and future plans for the Brown Program of Medical Education. The Editors.



DERMAQUIZ

Conducted by Francesco Ronchese, M.D.



At left, a nodule, slightly darker than the surrounding skin, congenital, in a 14 year old girl. At right, a ring shaped tumor, of two years duration, with a broken down center.

Answer on Page 35

Rhode Island Medical Society Necrology-1972

ROCCO ABBATE, M.D.

Rocco Abbate, M.D., the oldest practicing physician in Warwick, died August 8, 1972. He was 79 years old.

Born in Italy, he attended local schools in Providence and was a member of the first class to enter Providence College.

He graduated from Tufts Medical School and interned at Holy Family Hospital in Brooklyn, N.Y., and the Charles V. Chapin Hospital in Providence.

Doctor Abbate, who was one of the founders of the Rhode Island Blue Shield, was practicing medicine up until the time he entered the hospital.

He was a member of the Kent County Medical Society, the Rhode Island Medical Society, and the American Medical Association, and he was the Kent County medical examiner for 30 years. Doctor Abbate was on the staffs of Rhode Island, St. Joseph's, Roger Williams, Providence Lying-In and Kent County Memorial Hospitals.

▲ ▲ ▲

LEWIS ABRAMSON, M.D.

Lewis Abramson, M.D., a Newport physician, died January 9, 1972. He was 61 years of age.

Born in Woonsocket, he was graduated from Brown University in 1933 and Tufts University School of Medicine in 1937.

Doctor Abramson ran unsuccessfully for the Newport City Council in 1955. At the time of his death, he was a member of the Aquidneck Island Regional Disposal Authority. He was also a director of the Newport Chamber of Commerce, and a director of the Old Stone Bank, and he was active in many Newport organizations.

Doctor Abramson was a past president of the Newport Hospital Staff Association, a past president of the Newport County Medical Society, and a member of the Rhode Island Medical Society and American Medical Association, and secretary-treasurer of the Pelagos Pediatric Society.

▲ ▲ ▲

JOHN H. ARNOLD, M.D.

John H. Arnold, M.D., associate clinical professor of Pediatrics at Brown University, died April 14, 1972. He was 50 years old.

Born in Port Arthur, Texas, he was graduated

from the University of Texas and Tulane University Medical School.

During World War II, he was a captain in the Air Force, flying with the 9th Division which served the Air Offensive Detachment in Europe. For one year he was a prisoner of war in Germany. He was the recipient of the Distinguished Flying Cross, the Distinguished Unit Badge, Bronze Star and Purple Heart.

As a research fellow of pediatric infectious diseases, he worked with Dr. John Enders, the Nobel Prize winner, at Children's Hospital in Boston.

His teaching career began at Tulane, and he also had been on the faculty of the University of North Carolina before coming to Brown.

His professional affiliations included the Diplomate American Board of Pediatrics, the Providence Medical Association, the Rhode Island Medical Society, the American Medical Association, the American Association for the Advancement of Medical Science, and the Society of Sigma Chi Pediatric Research.

▲ ▲ ▲

ERNEST A. BURROWS, M.D.

Ernest A. Burrows, M.D., a former Providence neuropsychiatrist, died October 17, 1972. He was 77 years old.

Born in North Attleboro, he was graduated from the University of Maryland Medical School. He interned at Rhode Island Hospital.

While in the Army he served in France during World War I.

He was a member of the staff at Rhode Island Hospital, and was a visiting physician at both Charles V. Chapin and St. Joseph's Hospitals. He retired six years ago.

Doctor Burrows was a member of the Providence Medical Association, the Rhode Island Medical Society, the American Medical Association, the American Psychiatric Association, the Boston Society of Psychiatry and Neurology, and the Joshua K. Broadhead American Legion Post of North Providence.

▲ ▲ ▲

PAUL C. COOK, M.D.

Paul C. Cook, M.D., a retired physician, died July 23, 1972. He was 82 years of age.

(Continued on next page)

Born in Northfield, Massachusetts, he was graduated from Williams College in 1911 and Cornell Medical School in 1915. He interned at the Rhode Island and Lying-In Hospitals.

Doctor Cook served in the Navy with the Rhode Island Hospital unit at Queenstown, Ireland, during World War I. He started his practice in Rhode Island in 1915 and began a private practice in 1919. He was staff physician for St. Elizabeth's Home and the home for the aged on Broad Street, Providence, from 1932 until retiring.

Doctor Cook was physician and consultant at Rhode Island Hospital, Providence Lying-In Hospital and the Charles V. Chapin Hospital. His memberships included the American Medical Association, the Rhode Island Medical Society, the Providence Medical Association, of which he was past president; Alpha Omega Alpha, the Friday Night Club, the Triton Club of Quebec, and past president of the Mount Tom Club. He was a former member of the Edgewood Congregational Church and an attendant at Hope Valley Baptist Church.



PALMINO DI PIPPO, M.D.

Palmino DiPippo, M.D., a Providence physician for more than 40 years, died May 28, 1972 at the age of 65 years.

Born in Providence, he was graduated from Providence College in 1927 and he received his medical degree from Tufts Medical College in 1931.

He served his internship at St. Joseph's Hospital and Boston City Hospital.

He served in the U.S. Army from 1940 to 1945 with the 54th Medical Battalion in Africa, Sicily and Italy and was awarded the Bronze Star. He was discharged as a Lieutenant Colonel.

He was a member of the Providence Medical Association, the Rhode Island Medical Society, the American Medical Association, and the Malpighi Medical Society of Rhode Island.



LEO H. DUQUETTE, M.D.

Leo H. Duquette, M.D., a native of West Warwick, and a practicing physician in that community, died April 6, 1972. He was 62 years old.

Educated at La Salle Academy and Providence College, Doctor Duquette received his Doctorate in Medicine from Long Island College of Medicine in 1936.

He interned at Greenpoint Hospital, Brooklyn,

New York. He was on the courtesy staff at St. Joseph's Hospital.

He was a member of the Kent County Medical Society and the Rhode Island Medical Society.



ARTHUR E. HARDY, M.D.

Arthur E. Hardy, M.D., President of the Rhode Island Medical Society in 1962-63, died on May 15, 1972 at the age of 66 years.

A native of Warwick, he spent all his active life in the area. He was graduated from Warwick High School, and then from Brown University in 1925. He taught at Brown University as a post graduate student for one year and then entered Harvard Medical School where he received his medical degree in 1930.

Doctor Hardy served his internship at Charles V. Chapin and Rhode Island Hospitals, received his state medical license in 1933 and he was a resident at the State Infirmary until 1936 when he began his private practice in Warwick.

In his early practice he was chief of the medical advisory board of Local Draft Board No. 2 in Warwick. In 1958 he was chairman of the Rhode Island Joint Commission on the Care of the Patient.

Doctor Hardy lived in Warwick all his life. He was a past president of the Kent County Medical Society and for years he was chief of surgery at Kent County Memorial Hospital and he was on the staffs of Rhode Island and St. Joseph's Hospitals.

As president of the State Medical Society in 1963, he was chairman of the Rhode Island Oral Polio Foundation, which conducted a massive Sabin vaccine immunization campaign.

He was a member of the American College of Surgeons and of the American Medical Association for nine years and was delegate or alternate delegate of the Rhode Island society to the AMA.



CLIFFORD S. HATHAWAY, M.D.

Clifford S. Hathaway, M.D., a physician in South County for 43 years, died June 9, 1972 at the age of 78 years.

Born in South Kingstown, he was graduated from Brown University in 1915 and he served as a professor of chemistry there before entering Harvard University Medical School where he graduated in 1927. In his third year at Harvard, he was elected president of his class.

He interned at Rhode Island Hospital.

He was a member of the Rhode Island Medical Society, the American Medical Association, and he was a former president of the Washington County Medical Society.



HARMON P. B. JORDAN, M.D.

Harmon P. B. Jordan, M.D., superintendent of Providence Lying-In Hospital from 1926 until 1959, died May 31, 1972. He was 82 years old.

Born in Lincoln, he was graduated from Brown University and Tufts Medical School in 1912.

The first year he worked as a doctor was in Providence in 1912. In that year, as a young graduate of Tufts Medical School, he joined the staff of the Providence City Hospital — now the Charles V. Chapin Hospital. He became one of an outstanding corps of public health physicians whose effect on modern medical practice throughout the country became nationally known.

There, he was among the first physicians in the country to successfully use a serum to control measles, which at that time caused large numbers of deaths.

The same year that he joined the Providence City Hospital as a staff physician, he became its assistant superintendent, a post he held, except for two years of military service during World War I, until he became superintendent at Lying-In in 1926.

He was a member of the Officers Reserve Corps during World War I, where he commanded the 334th Ambulance Company of the 309th Sanitary Train in the 84th Division in France. Then he was made director of a field hospital in France.

During Doctor Jordan's 33 years as superintendent of Lying-In Hospital it became the fifth largest maternity hospital in the United States and it achieved what was believed to be the best record for low infant and maternal deaths in any major institution in the country, and perhaps the world.

Doctor Jordan was a member of the Providence Medical Association, the Rhode Island Medical Society, the American Medical Association, the American College of Hospital Administrations and the Hospital Association of Rhode Island.



HOWARD G. LASKEY, M.D.

Howard G. Laskey, M.D., a Carolina physician and a pioneer in organic farming, died March 3, 1972. He was 68 years of age.

Born in Boston, Doctor Laskey was a graduate

of Boston and Harvard Universities and had served as a lieutenant in the Army. In 1960 he received a master's degree in English from the University of Rhode Island and he was elected a member of the honor society, Phi Kappa Phi.

A true country doctor, he lived in Carolina for 35 years, and served for much of that time as town health officer in Richmond and Charlestown. In 1959 he was named medical examiner for Washington County.

Doctor Laskey also ran the Black Acre Farm in Carolina, and was among the first Rhode Island farmers to use the "bio-dynamic" method of farming — or more popularly known as "organic farming".

He was a member of the Rhode Island Medical Society and the American Medical Association.



EDWARD A. McLAUGHLIN, M.D.

Edward A. McLaughlin, a Providence physician for more than 50 years, died July 30, 1972 at the age of 78 years.

Born in Providence, he was graduated from Brown University in 1914 and Harvard Medical School in 1918. He interned at Rhode Island and Providence Lying-In Hospitals.

A director of health under five Democratic governors, he was first named to that office when state health agencies were consolidated into a single department under the Governmental Reorganization Act of 1935.

At the time of his appointment by Gov. Theodore Francis Green in 1935 as state director of public health, he had been for 10 years a school physician and a deputy police surgeon in this city.

As state director of health, Doctor McLaughlin had been for 18 years an ex-officio member of the Board of Blue Cross directors and he continued as a member of that insurance plan's corporation after leaving public office in 1959.

He had served as president of the Rhode Island Infantile Paralysis Foundation continuously since 1935 and he was one of its incorporators. On many occasions he had headed the annual March of Dimes drive in the state.

In 1934 he was elected president of the Friendly Sons of St. Patrick. He also was a member of the Sons of Irish Kings, the Harvard and Brown Clubs of Rhode Island, the Providence Lodge of Elks and was a Fourth Degree Knight of Columbus.

(Continued on Next Page)

In addition to being a member of the Providence Medical Association, he also belonged to the Rhode Island Medical Society and the American Medical Association and he was a charter member of the American Board of Preventive Medicine and Public Health.

▲ ▲ ▲

JOHN MOCHNACKY, M.D.

John Mochnacky, M.D., a Providence physician for many years, died April 30, 1972 at the age of 62.

Born in Cumberland, he was a graduate of Brown University class of 1939, Tufts Medical School 1943, and he served his internship at Rhode Island Hospital. He served as a captain in the Army Medical Corps during World War II. Doctor Mochnacky was on the staff of St. Joseph's Hospital and he was in private practice at 67 Broad Street, Providence, for many years.

He was a member of the Providence Medical Association, the Rhode Island Medical Society and the American Medical Association.

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SAMUEL H. NATHANS, M.D.

Samuel H. Nathans, M.D., of Westerly, died May 20, 1972. He was 65 years old.

Born in Boston, he was graduated from Harvard University, and Tufts University where he received his medical degree in 1933.

After interning at Fall River General Hospital, he became a general practitioner in Providence in 1934 where he was an anesthetist visitor in the medical outpatient departments of the Miriam and Rhode Island Hospitals.

Doctor Nathans served in the Army in World War II as a medical officer and he later opened an office in Hope Valley before being named head of anesthesia at Westerly Hospital.

He was a charter member and past secretary of the Rhode Island Society of Anesthesiologists and was the Rhode Island-Connecticut director for the American Society of Anesthesiologists from 1956 to 1962.

He served as Vice President of the Rhode Island Medical Society in 1963-64.

▲ ▲ ▲

THOMAS L. O'CONNELL, M.D.

Dr. Thomas L. O'Connell, a Providence eye, ear, nose and throat specialist, died October 29, 1972 at the age of 65 years.

Born in Woburn, Massachusetts, he was graduated from Boston College and he attended Harvard University and he was later graduated from Bos-

ton University Medical School.

He interned at the Carney Hospital and Boston City Hospital.

Doctor O'Connell served with the Army Civilian Conservation Corps in Waterbury, Vermont as medical officer and was a lieutenant commander in the Navy from 1943-45, serving in the Atlantic and Pacific Theaters. He was awarded the Distinguished Service Cross upon his discharge.

He was chief of ear, nose and throat service at St. Joseph's in the mid 1960s.

He was a member of the Providence Medical Association, the Rhode Island Medical Society, and a fellow of the American College of Ophthalmology and Otolaryngology.

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ROBERT R. ROCKLIN, M.D.

Robert R. Rocklin, M.D., a Providence physician, died April 21, 1972. He was 51 years old.

Born in Massachusetts, he was graduated from the University of California at Los Angeles in 1945 and Tufts Medical School in 1948.

He interned at Goldwater Memorial Hospital in New York and Los Angeles General Hospital.

He was a member of the Providence Medical Association and the Rhode Island Medical Society.

He served in the U.S. Army during World War II.

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KURT E. ROSE, M.D.

Kurt E. Rose, M.D., a physician in Barrington, died August 30, 1972 at the age of 62 years.

Born in Germany, he was graduated from the University of Zurich. He came to the United States in 1935 and completed his medical internship at Holy Cross Hospital, Salt Lake City, Utah.

He served as a major in the Army Air Corps in World War II.

Before he began practicing in Rhode Island, Doctor Rose was a staff member of the Judge Baker Clinic, the Douglas Thom Clinic and the Children's Hospital, all of Boston. He was also a former staff member at the Bradley Hospital, East Providence.

He was a consultant at the Portsmouth school system, St. Mary's Home, North Providence, St. Aloysius Home, Greenville, and the Rhode Island Medical Center.

Doctor Rose was a member of the Providence Medical Association, the Rhode Island Medical Society, the American Medical Association, and the American Psychiatric Association.

▲ ▲ ▲

CHARLES L. SOUTHEY, M.D.

Charles L. Southey, M.D., a practicing physician in Cranston since 1938, died December 1, 1972. He was 75 years of age.

Doctor Southey served for a short period in the Navy during World War I. An alumnus of Bates College, he graduated from the University of Louisville Medical School in 1928. He also studied at Yale and Brown universities.

Doctor Southey served 28 years as Cranston's superintendent of health. He also served as an examining physician for the Cranston Draft Board and he was a member of the city's Tuberculosis and Health, and District Nursing Associations.

He was a member of the Providence Medical Association, the Rhode Island Medical Society, and the American Medical Association.



RALPH V. SULLIVAN, M.D.

Ralph V. Sullivan, M.D., a practicing physician in Providence since 1937, died December 1, 1972. He was 64 years of age.

Born in Providence, Doctor Sullivan was graduated from Providence College in 1931 and from the Georgetown Medical School in 1936. He did postgraduate work at Harvard Medical School.

Doctor Sullivan served his internship in Gallagher Hospital, Washington, D.C.

He was a member of the Providence Medical Association, the Rhode Island Medical Society, and the American Medical Association.



WILLIAM H. TULLY, JR., M.D.

William H. Tully, Jr., M.D., a physician in Wakefield, died September 4, 1972. He was 55 years old.

Born in South Kingstown, he was graduated from Providence College in 1938 and from Georgetown University Medical School in 1942.

After his graduation from medical school, Doc-

tor Tully was commissioned an ensign in the Naval Reserve and interned at St. Joseph's Hospital, Providence. He served 33 months on active duty and was released in 1946 as a lieutenant. During his active duty, Doctor Tully served 24 months as medical officer for the destroyer Wadleigh.

After his release from active duty he returned to private practice and was one of five doctors who set up a medical center in Wakefield. He retired from the Naval Reserve in 1969 as a lieutenant commander.

He was a member of the Rhode Island Medical Society and the American Medical Association.



EDWARD J. WEST, M.D.

Edward J. West, M.D., superintendent of the Charles V. Chapin Hospital for more than two decades until its operation passed from city to state control six years ago, died December 3, 1972 at his home. He was 70 years old.

Born in Providence, Doctor West was a graduate of Brown University in 1924 and Harvard Medical School in 1929.

Doctor West had seen the hospital undergoing an unusual transition during his term. Primarily a hospital for contagious cases, the invention of the Salk vaccine and a sharp drop in polio cases changed its character.

This transition was more abrupt than the one that had been taking place for years as fewer contagious disease cases were available and beds at the hospital emptied. Doctor West adapted to the changes and he helped mold the new look of Charles V. Chapin Hospital.

In his last years as superintendent the hospital was turning toward psychiatric care, often in the field of alcoholism.

Doctor West was a member of the Providence Medical and Rhode Island Medical Societies and the American Medical Association.



In serious gram-negative infections*

Simplified dosage guidelines

Usual adult dosage - - I.M. and I.V. - - in patients with normal renal function

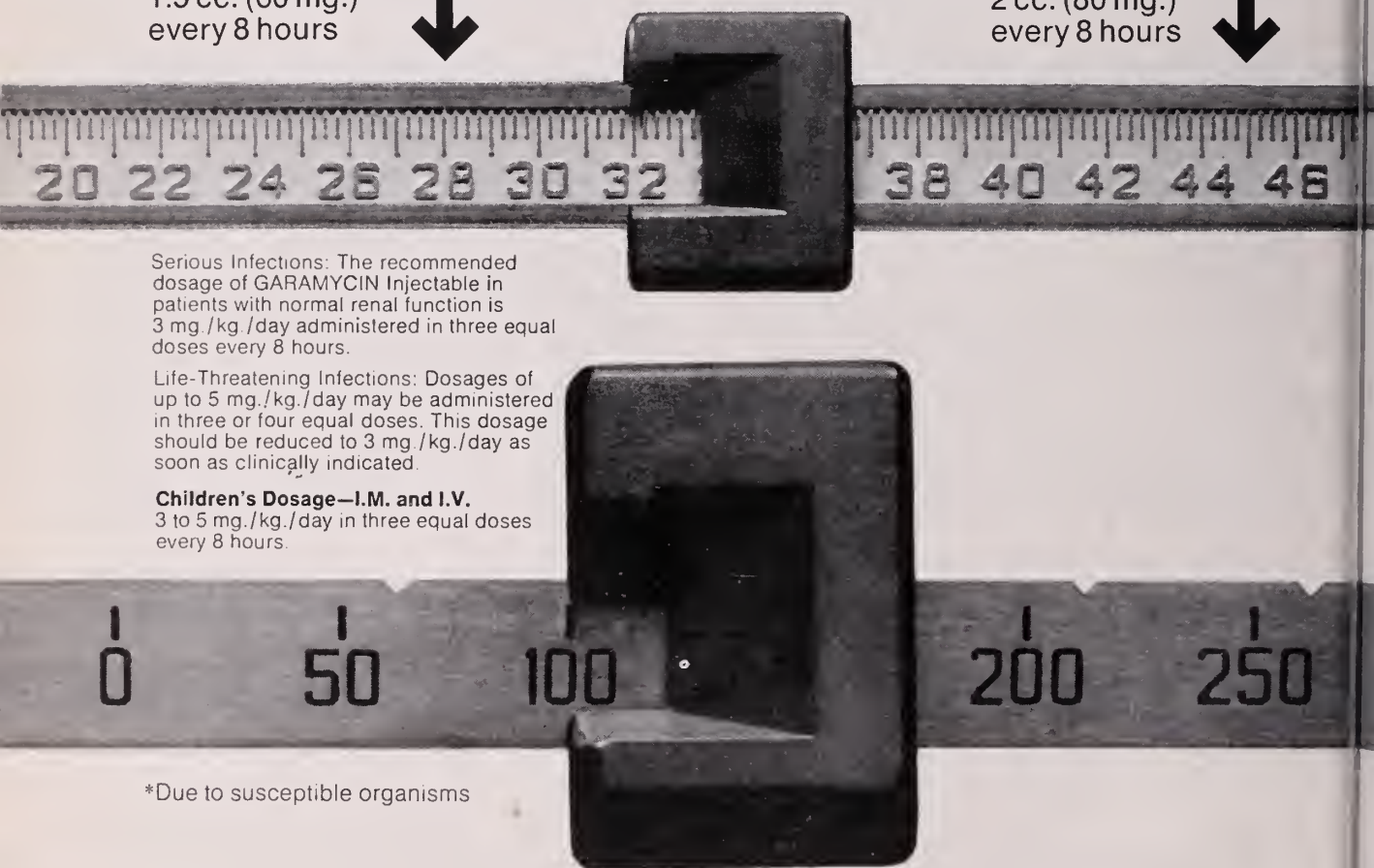
132 lbs. or less

1.5 cc. (60 mg.)
every 8 hours



Over 132 lbs.

2 cc. (80 mg.)
every 8 hours



Serious Infections: The recommended dosage of GARAMYCIN Injectable in patients with normal renal function is 3 mg./kg./day administered in three equal doses every 8 hours.

Life-Threatening Infections: Dosages of up to 5 mg./kg./day may be administered in three or four equal doses. This dosage should be reduced to 3 mg./kg./day as soon as clinically indicated.

Children's Dosage—I.M. and I.V.

3 to 5 mg./kg./day in three equal doses every 8 hours.

*Due to susceptible organisms

WARNING

Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

Ototoxicity, both vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment.

Monitoring of renal and eighth nerve function is recommended during therapy of patients with known impairment of renal function. This testing is also recommended in patients with normal renal function at onset of therapy who develop evidence of nitrogen retention (increasing BUN, NPN,

creatinine or oliguria). Evidence of ototoxicity requires dosage adjustments or discontinuance of the drug.

In event of overdose or toxic reaction, peritoneal dialysis or hemodialysis will aid in removal of gentamicin from the body.

Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic or nephrotoxic drugs, particularly str

Garamycin[®]

gentamicin sulfate

injectable

I.M./I.V.

40 mg. per cc.

Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin

Duration of therapy—I.M. and I.V.

The usual duration of treatment is 7 to 10 days. In difficult and complicated infections, a longer course of therapy may be necessary.

Instructions for I.V. use

Dilution—A single dose is diluted in 100 or 200 cc. of sterile normal saline or in a sterile solution of dextrose 5% in water; in infants and children, the volume of diluent should be less. The concentration of gentamicin in solution should not exceed 1 mg./cc. (0.1%).

Infusion time—The solution is infused over a period of 1 to 2 hours.

Premixing—GARAMYCIN Injectable should not be physically premixed with other drugs but should be administered separately in accordance with the recommended route of administration and dosage schedule.

In adults with impaired renal function

The single dose of GARAMYCIN Injectable given by patient weight remains the same; however, the interval between doses must be extended.

This interval may be approximated by multiplying the serum creatinine by eight as follows:

$$\text{Serum creatinine (mg./100 ml.)} \times 8 = \text{frequency of administration (in hours)}$$

This dosage schedule is not intended as a rigid recommendation, but is provided as a guide to dosage when the measurement of gentamicin serum levels is not feasible.

See Clinical Considerations section which follows...

1, neomycin, kanamycin, cephaloridine, cefotaxime, polymyxin B, and polymyxin E (Biotin), should be avoided. The concurrent use of gentamicin with potent diuretics should be avoided, since certain antibiotics by themselves may cause ototoxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity. **USE IN PREGNANCY** Safety for use in pregnancy has not been established.

Garamycin® Injectable
brand of gentamicin sulfate U.S.P., injection, 40 mg./cc.
Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin
For Parenteral Administration

WARNING: Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

Ototoxicity, both vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment.

Monitoring of renal and eighth nerve function is recommended during therapy of patients with known impairment of renal function. This testing is also recommended in patients with normal renal function at onset of therapy who develop evidence of nitrogen retention (increasing BUN, NPN, creatinine or oliguria). Evidence of ototoxicity requires dosage adjustments or discontinuance of the drug.

In event of overdose or toxic reactions, peritoneal dialysis or hemodialysis will aid in removal of gentamicin from the blood.

Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic and/or nephrotoxic drugs, particularly streptomycin, neomycin, kanamycin, cephaloridine, viomycin, polymyxin B, and polymyxin E (colistin), should be avoided.

The concurrent use of gentamicin with potent diuretics should be avoided, since certain diuretics by themselves may cause toxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity.

USE IN PREGNANCY Safety for use in pregnancy has not been established.

INDICATIONS GARAMYCIN Injectable is indicated, with due regard for relative toxicity of antibiotics, in the treatment of serious infections caused by susceptible strains of the following microorganisms:

Pseudomonas aeruginosa, *Proteus* species (indole-positive and indole-negative), *Escherichia coli* and *Klebsiella-Enterobacter-Serratia* species.

Clinical studies have shown GARAMYCIN Injectable to be effective in septicemia and serious infections of the central nervous system (meningitis), urinary tract, respiratory tract, gastrointestinal tract, skin and soft tissue (including burns).

Bacteriologic tests to determine the causative organisms and their susceptibility to gentamicin should be performed.

Bacterial resistance to gentamicin develops slowly in stepwise fashion; there have been no one-step mutations to high resistance.

In suspected or documented gram-negative sepsis, GARAMYCIN may be considered as initial therapy. The decision to continue therapy with this drug should be based on the results of susceptibility tests, the severity of the infection, and the important additional concepts contained in the Warning Box. In the neonate with suspected sepsis or staphylococcal pneumonia, a penicillin type drug is usually indicated as concomitant antimicrobial therapy.

GARAMYCIN Injectable has been shown to be effective in serious staphylococcal infections. It may be considered in those infections when penicillins or other less potentially toxic drugs are contraindicated and bacterial susceptibility testing and clinical judgment indicate its use.

CONTRAINDICATIONS A history of hypersensitivity to gentamicin is a contraindication to its use.

WARNINGS See Warning Box.

PRECAUTIONS Neuromuscular blockade and respiratory paralysis have been reported in the cat receiving high doses (40 mg./kg.) of gentamicin. The possibility of these phenomena occurring in man should be considered if gentamicin is administered to patients receiving neuromuscular blocking agents such as succinylcholine and tubocurarine.

Treatment with gentamicin may result in overgrowth of nonsusceptible

organisms. If this occurs, appropriate therapy is indicated.

ADVERSE REACTIONS

Nephrotoxicity: Adverse renal effects, as demonstrated by rising BUN, NPN, serum creatinine and oliguria, have been reported. They occur more frequently in patients with a history of renal impairment treated with larger than recommended dosage.

Neurotoxicity: Adverse effects on both vestibular and auditory branches of the eighth nerve have been reported in patients on high dosage and/or prolonged therapy. Symptoms include dizziness, vertigo, tinnitus, roaring in the ears and hearing loss.

Numbness, skin tingling, muscle twitching, and convulsions have also been reported.

Note: The risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

Other reported adverse reactions, possibly related to gentamicin, include increased serum transaminase (SGOT, SGPT), increased serum bilirubin, transient hepatomegaly, decreased serum calcium; splenomegaly, anemia, increased and decreased reticulocyte counts, granulocytopenia, thrombocytopenia, purpura; fever, rash, itching, urticaria, generalized burning, joint pain, laryngeal edema; nausea, vomiting, headache, increased salivation, lethargy and decreased appetite, weight loss, pulmonary fibrosis, hypotension and hypertension.

DOSAGE AND ADMINISTRATION GARAMYCIN Injectable may be given intramuscularly or intravenously.

For Intramuscular Administration:

PATIENTS WITH NORMAL RENAL FUNCTION*

Adults: The recommended dosage for GARAMYCIN Injectable for patients with serious infections and normal renal function is 3 mg./kg./day, administered in three equal doses every 8 hours.

For patients weighing over 60 kg. (132 lb.), the usual dosage is 80 mg. (2 cc.) three times daily. For patients weighing 60 kg. (132 lb.) or less, the usual dose is 60 mg. (1.5 cc.) three times daily.

In patients with life-threatening infections, dosages up to 5 mg./kg./day may be administered in three or four equal doses. This dosage should be reduced to 3 mg./kg./day as soon as clinically indicated.

*In children and infants, the newborn, and patients with impaired renal function, dosage must be adjusted in accordance with instructions set forth in the Package Insert.

For Intravenous Administration:

The intravenous administration of GARAMYCIN Injectable is recommended in those circumstances when the intramuscular route is not feasible (e.g., patients in shock, with hematologic disorders, with severe burns, or with reduced muscle mass).

For intravenous administration, in adults, a single dose of GARAMYCIN Injectable may be diluted in 100 or 200 cc. of sterile normal saline or in a sterile solution of dextrose 5% in water; in infants and children, the volume of diluent should be less. The concentration of gentamicin in solution, in both instances should normally not exceed 1 mg./cc. (0.1%). The solution is infused over a period of 1 to 2 hours.

The recommended dose for intravenous administration is identical to that recommended for intramuscular use.

GARAMYCIN Injectable should not be physically pre-mixed with other drugs, but should be administered separately in accordance with the recommended route of administration and dosage schedule.

HOW SUPPLIED GARAMYCIN Injectable, 40 mg. per cc., 2 cc. multiple-dose vials for parenteral administration.

Also available, GARAMYCIN Pediatric Injectable, 10 mg. per cc., 2 cc. multiple-dose vials for parenteral administration.

APRIL, 1972
AHFS Category 8:12.28

For more complete prescribing details, consult Package Insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Professional Services Department, Schering Corporation, Kenilworth, New Jersey 07033.

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Garamycin®
gentamicin
sulfate
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I.M./I.V.

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Book Review

A SYNOPSIS OF CONTEMPORARY PSYCHIATRY by George A. Ulett, Fifth Edition. The C. V. Mosby Company, St. Louis, 1972. \$10.90.

To attempt to present a brief condensation of the vast and complex field of psychiatry, contemporary or otherwise, is especially difficult, because only the "cream" of the many and various aspects of the subject must be dug out and yet presented in a meaningful, coherent, and helpful manner. To review such a work seems to present similar difficulties. In the author's own words, "As much as possible, this book will be organized as are other medical synopses to serve as a convenient, easy reference. It is divided into three sections: *Diagnostic Procedures, Major Disease Entities, and Therapeutics*". In the *Introduction* the author states, "we would like to emphasize the great need for application of the scientific method to collection and analysis of psychiatric data — to correct a failure which is almost universal in reports in the field of clinical psychiatry and which fills our literature with much confusing *misinformation*". Later, "In view of the above, it is with considerable trepidation that one writes a text in this field — especially a brief text — where lack of space for giving alternative theories forces a somewhat dogmatic presentation. We feel, however, with the current trend toward detailed encyclopedic compilations which attempt to cover the total mushrooming field of psychiatric schools, philosophies, and theories, that the need is now greater than ever before, for a brief, factual and eclectic introduction to the increasingly complex field of psychiatry". Bouyed up by such quotations, a reviewer "with considerable trepidation" accepts the task which lies ahead. To approach a review of this nature simply with broad sweeping generalizations — hardly possible from both an objective as well as subjective point of view — would amount to not more than the reviewer's synopsis of psychiatry rather than the author's.

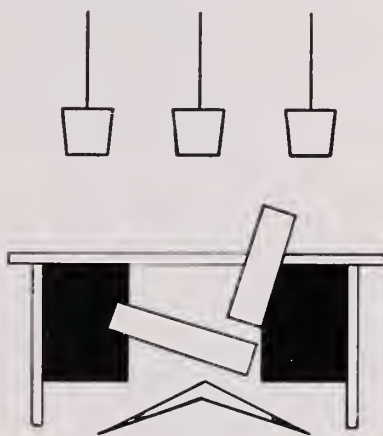
The book itself measures approximately 7¾ by 5 inches and weighs around 1 pound, suitable for a coat pocket or handbag. In the *Preface* the author presents a self-explanatory statement: "Today patient care moves steadily into the community, while at the same time admissions to hospital inpatient services continue to rise. Ever greater numbers of persons are becoming involved

(Continued on next page)

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in the treatment and rehabilitation of the mentally ill. Thus, more than ever before, there is need for a brief eclectic textbook to present the facts about mental illness simply and to serve as an introduction to this complex field for the beginning medical student, nurse, or mental health worker. Previous editions of this small book have also found use as a review for professional examinations and as a concise pocket compendium for busy general physicians". There are approximately six pages covering the *History of Psychiatry*, dating back to Hippocrates (c 460 B.C.) and Galen (200 A.D.) followed by an "interval of fifteen centuries of primitive attitudes of fear". There are at least 26 names of outstanding contributors to psychiatry during the eighteenth and nineteenth centuries and another 35 names beginning the 20th century, including French, English, American, and German workers. It is remarkable that the author can present the gist of each contributor in only a few sentences and in such areas as nosology, disease classification, hypnosis, theories, psychodynamics, diagnostic psychologic testing, and therapy.

Part 1 deals with *Diagnostic Procedures*. This considers examination of the psychiatric patient, including not only a mental status examination, but also a longitudinal case history. There is a statement on the general and neurological examinations and an excellent quick outline of an examination of the nervous system which includes all the cranial nerves, the cerebellum, and the sensory and motor systems.

Next, a chapter on Aphasia, Apraxia and Agnosia, including a diagram of the cortex of the brain. This chapter indicates some of the newer concepts on speech and language. There are helpful suggested tests for Agnosia (recognition), Apraxia (motor disturbances), and Aphasia (speech). One doubt occurs here, namely that the *thinking process* can validly be viewed *entirely* in terms of brain anatomy, physiology, and chemistry. The chapter on *Electroencephalography* with its description of terms is excellent for beginners. It covers about five pages and figure 2 gives illustrations of various tracings. Next, *Psychological Examination*. Intelligence tests, projective tests, inventory tests, and others are listed and described with suggestions as to what is actually measured. There is an excellent review of the Rorschach, including questions as what is seen (in the test), where it is seen, why seen, and so forth. There are two excellent diagrams to help understand the fuller

(Continued on Page 38)



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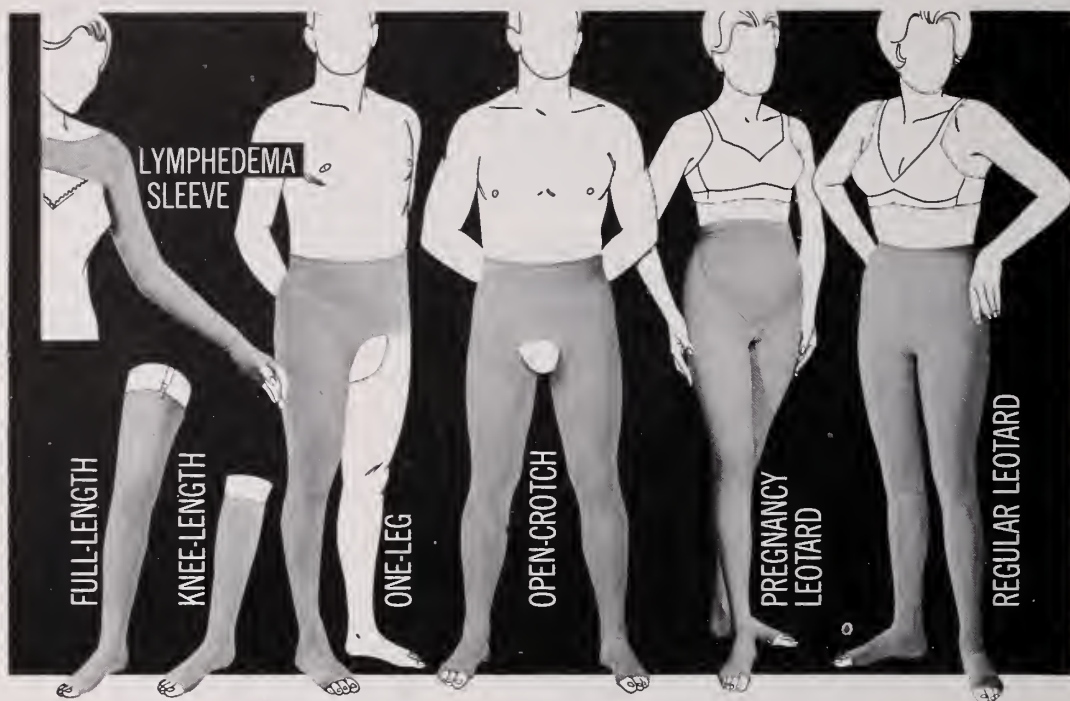
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- ☐ Bactocill (sodium oxacillin) capsules equivalent to 250 mg. and 500 mg. oxacillin and vials for injection equivalent to 500 mg. and 1 gm. oxacillin.



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"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%

Believe combination drug products are useful.

13.8%

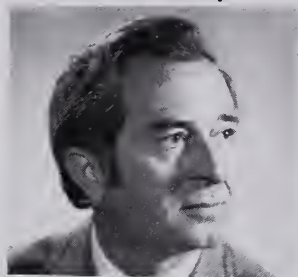
Do not believe combination drug products are useful.

Are combination drug products useful in treatment involving concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

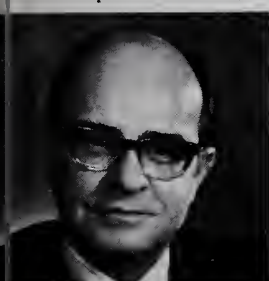
tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in use for a number of years and that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I am thinking particularly of penicillin-streptomycin combinations that patients—especially surgical patients—were given in oral injection. This made for less discomfort for the patient, less demand on nurses' time, and fewer opportunities for dosage errors. To take such preparation off the market doesn't seem to be good medicine, unless actual usage showed a great deal of harm from the injection (rather than the prophylactic use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA must play a major role in making this determination. In fact, I don't think it can avoid taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence and in making the ultimate decision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are used effectively to treat a certain condition, and it is known that they are compatible, it clearly is useful and convenient to provide them in one dosage form. It would make no sense, in fact it would be pedantic, to insist they always be prescribed separately. To avoid the appearance of candor, the "expert" decries the combination because it is a fixed dosage form. When the "expert" invokes the concept of fixed dosage form he obscures the fact that single-ingredient pharmaceutical preparations are also fixed dosage forms. By a singular semantic exercise he imputes a pejorative meaning to the term "fixed dose" only when he uses it with respect to combinations. What is ignored is the simple fact that only in the worst of circumstances does any physician attempt to titrate an exact therapeutic response in his patient. It is quite possible that some aches and pains will respond to 500 mg. of aspirin yet that fact does not militate against the usual dose being 650 mg. The other semantic ploy often called into play is to describe a combination product as rational or irrational.

Take antibiotic mixtures, a source of much of the criticism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

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Normal Pressure Hydrocephalus: A Five Year Experience At Rhode Island Hospital

While Results Are Not Wholly Predictable, Seemingly Hopeless Cases Have Been Restored To Health

By John A. Roque, M.D.

Most of us who practice medicine have probably come to accept with resignation the therapeutic vacuum associated with such clinical manifestations as dementia in the elderly patient. As any clinician knows, the state hospital wards and convalescent homes house many such unfortunate persons, and the outlook for any improvement is indeed bleak. Such cases have been primarily problems for institutional care. Consequently, when Adams, Hakim et al.¹ first described the possibility of surgical intervention and cure, intense interest was generated in medical circles throughout the world.

NEW SYNDROME DESCRIBED

In 1965 a newly recognized clinical entity was described, and somewhat erroneously termed normal pressure hydrocephalus or, more familiarly, NPH. This syndrome was characterized by dementia, incontinence of urine, and gait disturbance. A shunt procedure from the enlarged lateral ventricles of the brain to the jugular vein (or the pleural space) effected in many instances restoration to normal function in all three spheres. Thus a hopeless situation was found to be amenable to surgical therapy. Various criteria were established in an effort to delineate those who would lend themselves to this

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curative procedure. Spinal fluid pressure was within normal limits, and such signs of increased intracranial pressure as papilledema were lacking. In addition to the clinical triad previously noted pneumoencephalography revealed enlarged lateral ventricles (Fig. 1) with absence of air over the cortical surfaces.

More recently radioisotope cisternography, as described by DiChiro et al.,² has been employed. This presented a relatively simple technique and has been widely used to screen suspected patients prior to the more formidable pneumoencephalography. The procedure involved the injection of a small quantity of radio-iodinated serum albumin (RISA) into the spinal canal, followed by the usual scanning technique. In cases of normal pressure hydrocephalus a distinct pattern was noted with localization of the isotope in the lateral ventricles and its persistence in this location for more than 24 hours before spreading over to the remainder of the cerebral surface. In contrast, the normal picture showed no ventricular concentration of the isotope and spread to the cerebral surface in a few hours (Fig. 2).

As is often the case, however, following the initial flush of success numerous shunts were performed for a variety of clinical pictures. For example, operative procedures of this type were carried out for schizophrenia and depressed states.

(Continued on next page)



Figures 1a and b, (right) Note enlarged lateral ventricles with absence of air over cortical surface

as well as for many cases of simple brain atrophy thought to be due to NPH. Such a wide clinical spectrum was embraced in the diagnosis that, although some success was realized, many failures were reported. One was reminded of the era of the Goldblatt kidney and how, after a rash of nephrectomies to cure hypertension thought to be due to unilateral renal disease, this procedure fell into disrepute.

Benson et al.³ in an excellent review reported results of shunts in 14 patients out of 52 studied for NPH. Of these, 9 were improved with results ranging from slight to dramatic. In twelve of the 14 patients both pneumoencephalograms and cisternograms were consistent with NPH, while two had positive results in one procedure, but indeterminate results in the other.

Heinz⁴ reported a series of 150 cases, 126 had negative cisternograms. Five had shunts and all had poor results. Twelve patients showed positive cisternograms, all were shunted, and seven had good results.

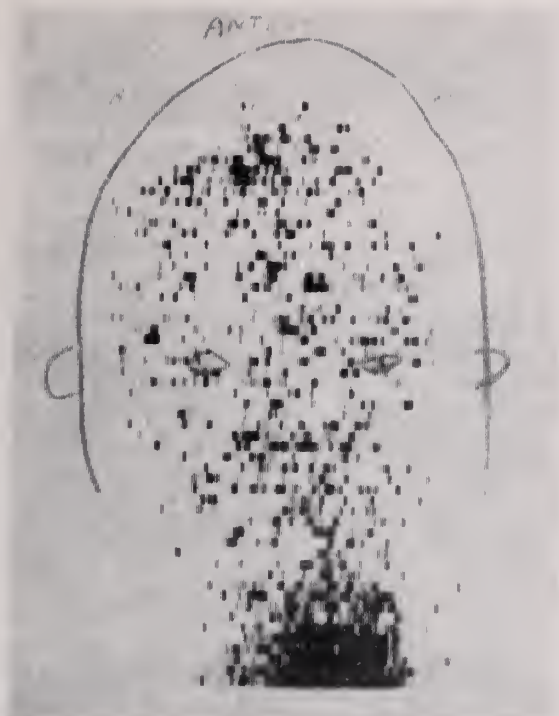
Staab⁵ reported 150 patients in whom 44 shunts were performed. Of these 26 (59 per cent) were improved, 13 (29 per cent) showed no change, and 5 (12 per cent) were worse.

AUTHOR'S SERIES

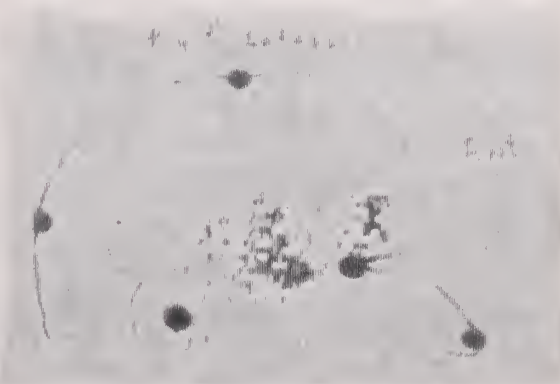
Since others had reported varying degrees of success, it was decided to review the Rhode Island Hospital experience. All cases of NPH treated at

Rhode Island Hospital during the 5 year period 1965 through 1969 were studied in detail. During this interval 22 shunt procedures for NPH were carried out. Unfortunately, considerable difficulty was encountered in assessing results, mostly because of the time lapse, but also because patients were both clinic and private, rendering follow-up at times somewhat unsatisfactory. The assessment of improvement was based on discussion with the attending physician and occasionally by contact with the patient's family. Three cases were lost to follow-up despite our best efforts. Not enough information was available in these cases to give an accurate opinion as to results. The outcome was classified as good to excellent in 7 of the remaining 19 cases and fair to poor in 12. The criteria for this classification were improvement in gait, improvement in mentation, and recovery of urinary continence. Fair to poor results were characterized by little improvement in these functions and no apparent benefit from surgery, with death occurring in several.

Of the 7 cases that were improved, age appeared not to be a factor, since two were as young as 45 years of age while the oldest was 76. For some reason cisternography was not done in any of these cases and therefore was of no help in selection. This may be due partly to the fact that the procedure was not as commonly employed then as now, although one of the cases was studied in 1970 and two in 1969. Pneumoencephalography was per-



A and B (right) Normal cisternogram showing spread of radio nuclide throughout cranial structures



C and D (right). Picture of NPH with concentration of nuclide in ventricle even after 24 hours

formed in each case and showed dilated lateral ventricles with little or no air over the cerebral hemispheres. The clinical picture was characterized by difficulty in walking, and mental confusion and disorientation in practically all cases. Most of the

cases had previously suffered a cerebral hemorrhage, one of which was associated with an aneurysm of the vertebral artery and another with a fractured skull.

(Continued on next page)

In the cases that showed little or no improvement, again no common denominator was noted that would help predict the outcome. In these cases the age range was 46 to 81. Pneumoencephalography was carried out in all but 2 cases. In these 2 cases cisternography also was not performed. One of these 2 cases was a 61 year old male whose principal problem was loss of vision associated with an apparent cerebral thrombosis. Arteriography showed only tortuosity of the cerebral vessels. The other was a 46 year old male who was confused and disoriented following a cerebral hemorrhage secondary to an aneurysm. Of the remaining cases cisternography was performed in only 3. In one of these it was normal, in another it was described as equivocal while in the third it was considered rather typical for normal pressure hydrocephalus. Pneumoencephalography was normal in one case, but in all of the others dilatation of the lateral ventricles was described with little or no air over the cerebral surface. The clinical picture ranged from Parkinsonism to probable demyelinating disease with several cases of cerebral atrophy and thrombosis, and one of chronic brain syndrome with mental deficiency. An 81 year old man was also discovered to have a skull fracture. All of these cases did poorly. Two patients died after stormy postoperative courses, complicated in both instances by pneumonia. One of these cases had a fairly typical clinical story for NPH, with gait disturbance and confusion. The other was a 75 year old confused and blind lady, who seemed to have suffered from cerebral deterioration.

It is very difficult to draw conclusions from this series, especially from a prognostic viewpoint, since cisternography was used in only 3 cases of the entire group. It is possible that it might have been a useful criterion if employed more often.

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Pneumoencephalography was not considered to be of value, at least as used in this study. Practically every case showed dilated lateral ventricles, and almost none had air over the cerebral hemispheres. Recently described criteria include a corpus callosal angle of 120 degrees or less, and an anterior lateral ventricle height of greater than 30 mm. Perhaps in the future these findings will prove helpful.

SOME HOPELESS CASES RESTORED TO HEALTH

The clinician, both internist and neurosurgeon, is thus in a quandary, anxious to influence favorably the course of the disease, but understandably reluctant to subject a patient to useless surgery. It is the writer's opinion that at the present stage of development it is probably not possible to predict with confidence which patient exhibiting this syndrome will benefit from a shunt. It would seem that the most favorable candidate would present the following clinical criteria: (1) recent trauma or cerebral hemorrhage; and (2) a classical clinical triad of urinary incontinence, mental confusion, and gait disturbance, preferably of abrupt and recent onset. Cases associated with cerebral atrophy, cerebral thrombosis, Parkinsonism, and blindness should in general be excluded. Radioisotope cisternography should in each case provide the usual criteria as previously outlined. Pneumoencephalography may prove useful applying stricter criteria than merely dilated ventricles and lack of air over the cerebral hemispheres, namely assessment of the corpus callosal angle and the height of the anterior portion of the lateral ventricles. It is hoped that use of these criteria over the next period will result in a more favorable experience. However, even under present circumstances it is gratifying that 7 patients who previously would have been considered hopeless or suitable only for institutional care have been restored to health.

REFERENCES

- ¹Adams RD, Fisher EM, Hakim S, et al.: Symptomatic occult hydrocephalus with "normal" cerebrospinal fluid pressure. *N Engl J Med* 273:117-26, 15 Jul 65
- ²DiChiro G, Reames PM, Matthews WB Jr: RISA-ventriculography and RISA-cisternography. *Neurology* 14:185-91, Mar 64
- ³Benson DF, LeMay M, Patten D, et al.: Diagnosis of normal pressure hydrocephalus. *N Engl J Med* 283:609-15, 15 Sep 70
- ⁴Symposium on cisternography sponsored by Georgetown University Medical School, May 6-8, 1971
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Choledochal Cyst, Use Of Rose Bengal Scan In Diagnosis

Method Is Useful Because Of Simplicity, Safety, And Rapidity Of Results

By Joseph D. DiMase, M.D., Hee K. Lee, M.D.,
and Stephan I. Frater, M.D.

Choledochal cyst is a rare^{1,2} but potentially lethal entity because of the high morbidity and mortality in untreated patients³. The preoperative diagnosis has consistently eluded clinicians as most of the reported cases are diagnosed at surgery or post mortem. Recently Williams et al.⁴ reported a single case of choledochal cyst diagnosed preoperatively by hepatoscintigraphy. Kasai et al.⁵ also mentioned the use of hepatobiliary scanning as a helpful diagnostic tool in five cases of a total of twenty-one in their series.

Our report was prompted by a case clearly documented before surgery and is presented to re-emphasize the value of liver scanning in the disorder.

CASE REPORT

This 12 year old Caucasian female born with congenital deformity of the right ear canal was admitted to the Rhode Island Hospital for the third time on July 7, 1970 with the complaints of periumbilical pain, nausea, and vomiting and the discovery of jaundice. Her history dated back to

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age eight when she experienced her first attack of excruciating upper abdominal pain accompanied by nausea and vomiting. Attacks gradually became more frequent. The symptoms of pain and the development of jaundice led to hospitalization. On admission the liver was tender and enlarged 10 cm below the right costal margin by percussion and 8.5 cm below the xiphoid. There was no lymphadenopathy or splenomegaly. Total bilirubin was 4.6 mg per cent and 2.1 mg per cent direct, SGOT 107 units, alkaline phosphatase 45 KA units. On the fourteenth hospital day the bilirubin was 3.9 mg per cent total; pain persisted intermittently. The liver, however, decreased in size to 8 cm below the right costal margin in the mid-clavicular line and 6.5 cm at the xiphoid. She was discharged on the fifteenth hospital day with a tentative diagnosis of hepatitis. At home she continued to have episodes of sharp upper and mid abdominal pain with nausea and vomiting, and was readmitted eleven days after her last discharge.

On examination jaundice had increased. The liver was larger, and on repeated daily examinations a distinct mass was observed in the right epigastrium, which moved with respiration and appeared contiguous with the lever edge. The mass changed in size, varying 2 to 3 cm from day to day. Liver function studies showed the bilirubin to be 5.2 mg per cent total, 2.1 mg per cent direct, alkaline phosphatase 50 KA units, SGOT 110 units. A percutaneous transcostal biopsy revealed

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Figure 1

Oblique view of G.I. Series demonstrating large extrinsic mass in the right upper quadrant displacing stomach and duodenum anteriorly and to the left.

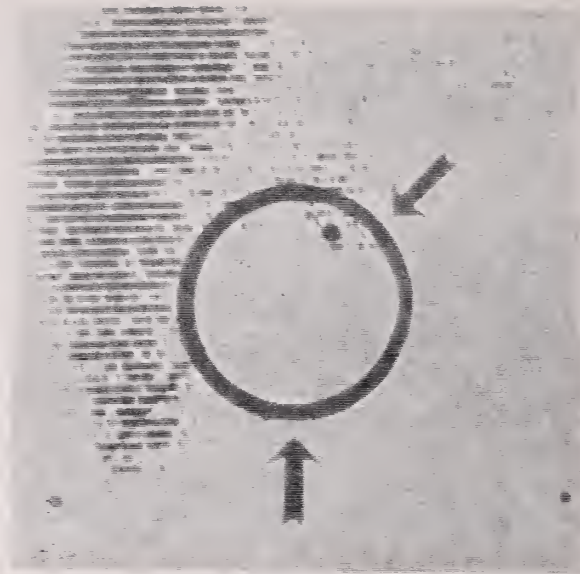


Figure 2

Liver scan using Tc-99m Sulfa Colloid showing large cold mass compressing the hilar area.

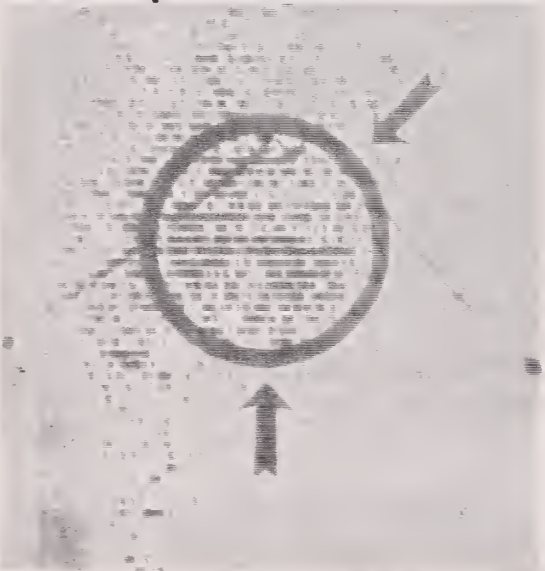


Figure 3a

¹³¹I rose bengal scan showing large intrahepatic cold mass compressing the hilar region.

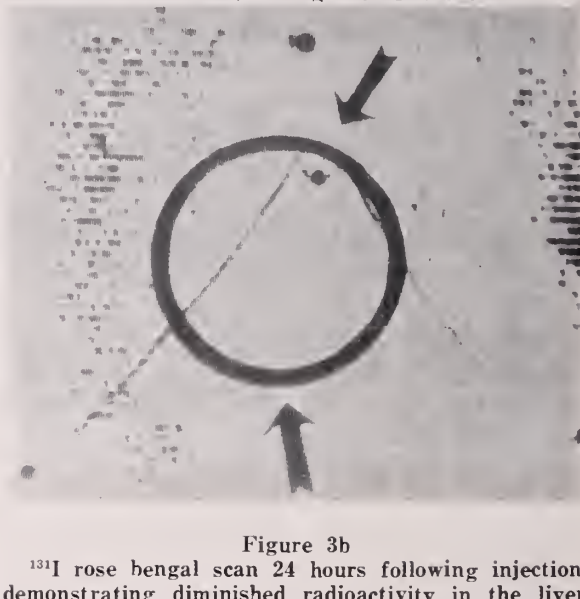


Figure 3b

¹³¹I rose bengal scan 24 hours following injection, demonstrating diminished radioactivity in the liver while the hilar mass now shows intense concentration of radioactivity.

Also noted some of the activity in the colon.

infiltration of portal triads with polymorphonuclear leukocytes and a few eosinophiles. Bile pigment was noted in the periphery of the lobules. The pathologist could not exclude obstructive jaundice. Despite the elevated bilirubin an intravenous cholangiogram was attempted but demonstrated no visualization of the biliary tract. An intravenous pyelogram demonstrated an extrinsic mass compressing the right renal pelvis and upper right ureter. A barium meal revealed a large extrinsic mass in the right upper portion of the abdomen displacing the stomach and duodenum anteriorly and to the left (Fig. 1). The findings

were interpreted as due to a large soft tissue mass emerging from the liver or neighboring structures.

A liver scan using Tc-99m sulfa colloid demonstrated a large cold mass compressing the hilar area (Fig. 2). A repeat scan using ¹³¹I rose bengal again demonstrated a large intrahepatic cold mass compressing the hilar region (Fig. 3a). The 24 hour scan showed diminished activity in the liver, while the mass became intensely radioactive. A small amount of the activity was shown in the intestinal tract and indicated an incomplete obstruction of the biliary system (Fig. 3b).

Correlation of the clinical, radiologic, and scan

data led to a diagnosis of choledochal cyst. On August 5, 1970 an operation confirmed the presence of a large choledochal cyst which measured approximately 8 cm in diameter. A portion of the cyst wall was resected, reducing the volume of the cystic cavity, and a choledochojejunostomy was performed. Postoperatively jaundice rapidly subsided and liver function studies returned to normal. Four months postoperatively the patient was asymptomatic and the liver was normal in size.

DISCUSSION

Although choledochal cyst is a disease entity most commonly found in infants and children, it is by no means restricted to those age groups. In one review by Gross³, 53 of 138 patients were over 20 years of age when the diagnosis was established. It occurs about four times more commonly in females than in males.

The etiology is unknown, but major theories include: 1) malformation of the wall of the common bile duct resulting in localized weakness and dilation, 2) congenital or acquired obstruction of the sphincter of Oddi or segment of the duct, and 3) neuromuscular dysfunction of the sphincter of Oddi akin to achalasia or congenital megacolon. It is interesting that our patient was born with a congenital deformity of the right ear, which was helpful in guiding us to consideration of a second congenital deformity of the biliary tract.

The diagnosis of choledochal cyst has been difficult to establish. In a review of 175 cases by Shallow et al.⁶ the preoperative diagnosis was made or mentioned as a possibility in 22 cases by other available methods, including clinical data, liver function tests, peritoneoscopy, and roentgenologic study. In Alonso-Lej's analysis of 94 cases⁷, the diagnosis was made in 11 cases and included in the differential diagnosis in 17 additional cases.

The triad of abdominal pain, upper abdominal mass, and obstructive jaundice in female patients is the classic presentation. Tsardakas et al.⁸, reviewed 232 cases, 63.3 per cent of which demonstrated this triad. Patients may be asymptomatic, or their symptoms may be characterized by periodicity and chronicity, eventually deteriorating and terminating fatally with liver failure or rupture of the cyst with bile peritonitis^{7, 9, 10}.

The nature of the abdominal pain varies from sharp epigastric pain accompanied by nausea and vomiting, to dull dragging sensation in the right upper quadrant. A clue to the diagnosis is a mass

in the right upper abdomen, which varies in size from day to day, as occurred in our patient. Jaundice may also fluctuate, since the obstruction to the flow of bile is generally not complete.

On rare occasions, the cyst wall is calcified; flat x-ray plate of the abdomen may then lead to a correct diagnosis⁶. Obstructive jaundice precludes oral cholangiography. Until the development of hepatoscintigraphy, intravenous cholangiography represented the most specific preoperative diagnostic procedure^{1, 11, 12}, but this study also has its limitations in the presence of biliary obstruction.

Liver scanning as a diagnostic tool provides advantages unequaled by other available methods. It is safe, atraumatic, easy to perform, and may be repeated without radiation hazard or morbidity from the dye. It is most useful in the case of a single discrete lesion and least useful when the pathologic process involves the entire liver. Hepatic lesions of greater than 3 cm in diameter are seldom missed by current methods of scanning¹⁴. Symptomatic choledochal cysts are, in general, larger than 2.5 cm² and should be clearly defined by present techniques, as demonstrated in this report and by others^{4, 5}.

Since I¹³¹ rose bengal is picked up by hepatocytes and excreted into the biliary tract, liver scanning with this material has been useful in differentiating biliary obstructions from hepatocellular disease. In the absence of obstruction rose bengal is detected in the upper small bowel within a short time of administration. In order to document a cystic mass communicating with the biliary tree it is imperative that repeat scanning be done 3 and 6 hours after the initial scan. A cold area as seen on the first scan will be converted to a hot one in subsequent scans, as demonstrated in our case (Fig. 3a, 3b). Since other entities causing cystic changes in the liver, such as polycystic liver disease, solitary hydatid cysts, or cysts due to amebiasis, do not have a direct communication with the biliary tree, subsequent scanning in these cases will not concentrate the radioactive material in the initial cold areas. The diagnosis by scanning is one made by inference and must be confirmed at the surgical table. Utilized in an appropriate clinical setting, liver scanning should be considered as a useful tool in the diagnostic workup of such a case.

SUMMARY

A case of choledochal cyst diagnosed preopera-

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tively by liver scanning using ¹³¹ rose bengal is presented, and a brief review of the literature concerning the disease is presented. Although similar reports have appeared in the recent literature pointing to the value of liver scanning, further emphasis regarding this technique is warranted because of its simplicity and safety, and the rapidity with which it may lead to a presumptive preoperative diagnosis.

REFERENCES

- ¹Fonkalsrud EW, Boles ET: Choledochal cysts in childhood. *Surg Gynecol Obstet* 121:733-742, Oct 65
- ²Judd ES, Greene EI: Choledochus cyst. *Surg Gynecol Obstet* 46:317-324, Mar 28
- ³Gross RE: *The Surgery of Infancy and Childhood*. Philadelphia, WB Saunders Company, 1953. Pp. 524-30
- ⁴Williams LE, Fisher JH, Courtney RA, et al: Preoperative diagnosis of choledochal cyst by hepatoscintigraphy. *N Engl J Med* 283:85-86, 9 Jul 70
- ⁵Kasai M, Asakura Y, Taira Y: Surgical treatment of choledochal cyst. *Ann Surg* 172:844-51, Nov 70
- ⁶Shallow TA, Eger SA, Wagner FB Jr: Congenital cystic dilation of the common bile duct. *Ann Surg* 117:355-86, Mar 43
- ⁷Alonso-Lej F, Rever WB Jr, Pessagno DJ: Congenital choledochal cyst, with a report of 2 and an analysis of 94 cases. *Int Abst Surg* 108:1-30, Jan 59
- ⁸Tsardakas E, Robnett AH: Congenital cystic dilation of the common bile duct. *AMA Arch Surg* 72:311-27, Feb 56
- ⁹Blegen HM, Boyer EL: Perforation of a choledochus cyst with biliary peritonitis, report of case submitted to three stage operation. *Journal-Lancet* 66:177-83, Jun 46
- ¹⁰Kiesewetter WB: Choledochal cyst. In Mustard WT, et al.: *Pediatric Surgery*. Second Edition Chicago, Year Book Medical Publishers, Inc., 1969. Pp. 747-50
- ¹¹Ravitch MM, Snyder GB: Congenital cystic dilation of the common bile duct. Special reference to radiographic studies. *Surgery* 44:752-65, Oct 58
- ¹²Silberman EL, Glaessner TS: Roentgen features of congenital cystic dilation of the common bile duct: A report of two cases. *Radiology* 82:470-75, Mar 64
- ¹³Covington EE: The accuracy of the liver photo-scans. *Am J Roentgenol* 109:724-4, Aug 70
- ¹⁴Freeman LM, Kay CJ, Derman A: Renal excretion of radioiodinated rose bengal—a pitfall in the interpretation of rose bengal abdominal scans. *J Nucl Med* 9:227-32, Jun 68



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Non-Seasonal Allergic Rhinitis

Inherited Atopic Disorder Will Yield To Careful Diagnosis And Management

By Guy A. Settipane, M.D.

Non-seasonal or perennial allergic rhinitis is characterized by intermittent or continuous nasal stuffiness, or rhinorrhea, or both, which may be associated with frequent sneezing, watery itchy eyes, post-nasal drip, and signs of sinusitis. These symptoms are thought to be due to an allergic mechanism usually involving inhalant allergens but occasionally associated with food allergy. Perennial allergic rhinitis as well as hay fever and asthma are found more frequently in certain families and are thought to be hereditary diseases. The frequency of perennial or non-seasonal allergic rhinitis resembles that of asthma, and in a recent college population study of 1,836 students was found to be at least 5.2 per cent.^{1, 2} There was no significant sex difference. The mean age of onset of this disorder was found to be 9.1 years, somewhere between the average age of onset of asthma, 6.9 years, and that of hay fever, 10.6 years.

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DIFFERENTIATION FROM OTHER NASAL DISORDERS

At the onset it is important to differentiate non-seasonal or perennial rhinitis from other conditions that may result in nasal stuffiness which may be easily remedied. Hypothyroidism, especially myxedema, may have as one of its prominent symptoms, a moderate to severe nasal stuffiness. Drugs such as Serpasil®, used in the treatment of hypertension, also may cause nasal stuffiness as one of their side effects. A common cause of non-allergic perennial rhinitis is the overuse of nose drops or sprays, both those sold "over the counter" or those prescribed by physicians. Mechanical nasal obstruction such as polyposis, septal deviation, and even foreign bodies must be excluded before the diagnosis of an allergic etiology is entertained. Nasal polyposis when found in children may be associated with mucoviscidosis. Finally, there are unknown but non-allergic causes of nasal stuffiness, some of which are disguised under the term of vasomotor rhinitis and others which are less common but still not adequately explained, such as the nasal stuffiness that occasionally accompanies pregnancy.

(Continued on next page)

CAUSATIVE FACTORS

After ruling out all possible non-allergic causes of rhinitis, a work-up for allergic disorders is undertaken. A detailed history of remissions and exacerbations is most important. Although the term perennial denotes that the rhinitis persists throughout the year, it is important to determine if it is worse in one season than others. A rhinitis that is worse in the winter months may be aggravated by house dust, mold, feathers, or animal dander allergy. A rhinitis that is worse in the spring may be associated with tree pollen allergy. Worsening in the summer may be associated with a grass pollen allergy, and in the fall with ragweed pollen. Allergies to molds such as *Alternaria* and *Hormodendrum* may account for exacerbations of rhinitis extending from early spring through the first freeze, since these molds frequently germinate in the unfrozen and moist soil. A combination of trees, grass, and ragweed pollen allergy may also account for an exacerbation from the early spring through the late fall.³

It is important to ascertain whether a rhinitis is worse indoors or out of doors. Exacerbations which occur indoors, but are relieved going out of doors are strongly suspicious of being caused by housedust, indoor molds, such as *penicillium* and *aspergillus*, or, if present, feathers and animal danders. Variations in the severity of allergies or exacerbations at various times of the day may also be significant. Exacerbation of a rhinitis at night may be due not only to the effect of positional changes on secretions, but also to the increased proximity of the allergy shock organ, in this case the nose, to the offending antigen, such as the feather pillow, housedust from the mattress, or even dust from the bedroom rug.

Knowledge of precipitating factors of allergic symptoms may furnish clues as to the identification of the offending allergens. For example, if the history reveals that severe sneezing, watery itchy eyes, and nasal stuffiness occur upon petting a dog or cat, or after ingesting eggs, at least one element in the diagnosis may be established. There may also be non-specific aggravating factors. Examples are strong chemical odors, such as hair spray, air pollution, such as cigarette smoke, and automobile exhaust fumes, dampness, rapid change in weather, or even physical exhaustion. A detailed history of causes of remissions and exacerbations of symptoms, therefore is one of the essential elements of an allergy work-up.

ELIMINATION OF SPECIFIC ANTIGEN

All patients with allergic rhinitis should have

allergy skin tests to inhalants and to common foods. The next step is elimination from the environment if possible of the specific allergen as identified by the detailed history and skin tests. If the allergen is cat or dog dander, pets should be removed from the home. When the allergen is a feather pillow, it may readily be replaced by a foam rubber pillow, or covered with airtight plastic or rubber. When the offending allergen is housedust, efforts should be made to reduce the amount of dust in the home. Plastic or rubber airtight covers should be placed on mattresses and pillows, rugs should be removed from the bedrooms, and filtering systems of hot air heating systems should be changed or improved. Careful attention should be paid to the indoor humidity. If a humidifier is used, it should be checked frequently for mold contamination.

If symptoms have not significantly improved by these environmental elimination procedures, elimination diets to rule out possible food allergies are tried. It is estimated that about two per cent of perennial rhinitis problems may have a food allergy component. There are many false negative reactions to allergy skin tests to foods and a few false positive reactions, especially when the scratch test technique is employed. Therefore, diets eliminating certain foods, especially eggs, milk, and wheat products, should be tried for at least 7 to 10 days for each food component. To rule out pure coincidence, any alleged improvement on a specific diet should be challenged with the particular food, followed again by elimination at least three times, in order to establish definitely a true cause-and-effect relationship. An important clue to this problem was reported by William P. Buf-fum⁴, who noted that children exhibiting many positive inhalant skin tests frequently have an associated food allergy problem.

TREATMENT

Oral antihistamines and local treatment of the nasal mucosal membranes may be needed if the rhinitis persists. If one type of antihistamine fails to produce satisfactory results, another with a basically different molecular structure should be tried. Some individuals, however, complain of excessive sedation with even small doses of antihistamines. Local treatment of the nasal mucous membranes consists of irrigation with a slightly saline solution or diluted commercially prepared soothing solutions such as Alkolol®. Plastic nasal douche cups are helpful aids to irrigation. Local applications to the nasal mucous membranes of corticosteroid solutions are at times helpful. Re-

peated use of local vasoconstrictors in the form of nose drops or sprays, however, is to be condemned as in the long run they will aggravate the condition.

When all of these procedures fail, hyposensitization, although a lengthy treatment, should be considered as a last resort. Only those specific antigens which are strongly indicated by the allergic history and confirmed by positive skin test reactions should be used. It is our practice not to include in the hyposensitization program foods or animal danders that can be eliminated from the environment. Hyposensitization treatment for a number of years may be required. If symptoms have been controlled for about 1½ or 2 years, hyposensitization treatment may be discontinued on a trial basis. Hyposensitization treatment should not be instituted as a means of preventing asthma, since asthma developing in individuals with allergic rhinitis is not common.

PREVENTION

The basic abnormality in allergic rhinitis appears to be, according to some authorities,^{5, 6} an increased permeability of the mucous membranes allowing pollens, spores, and other inhalants to stimulate the immunological system into producing reagin or skin sensitizing antibody. Reagin, which is probably responsible for the allergy symptoms, is found in the immunoglobulin E^{7, 8} fraction of serum proteins. It is extremely specific for a particular antigen and usually does not cross react with dissimilar antigens or allergens. Most individuals can be stimulated to produce reagin under specific conditions, such as in the subcutaneous injection of certain antigens.^{9, 10} Therefore, the ability to produce reagin is not limited to the atopic state. However, when certain antigens are applied locally to the nasal mucosal membrane, atopic individuals develop reagin much more readily than do normal individuals. This finding has led to the theory that in atopic individuals there is a basic abnormality in the mucous membrane. This theory is supported by a recent study¹¹ indicating that the frequency of bee sting allergy is the same in an atopic and a normal population. Since the antigen of bees and other Hymenoptera insects is injected subcutaneously (thus circumventing the defective mucous membrane in atopic individuals), it would follow that bee sting allergy should not be more prevalent in an atopic than a normal population.^{12, 13, 14}

Because this defective mucous membrane in allergic rhinitis predisposes to sensitization to other

inhalant allergens, it is wise to eliminate from the immediate environment other possible strong allergens such as pets and feather pillows even before the patient demonstrates sensitization. Prolonged exposure of atopic individuals to high concentrations of these allergens may result in the development of significant allergic manifestations because of this presumed basic abnormality in the mucous membranes.

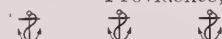
CONCLUSION

Non-seasonal allergic rhinitis, like hay fever, asthma, and atopic eczema, is believed to be an inherited allergic or atopic disease. A detailed history and scrupulous allergic management are necessary for prevention and control of symptoms.

REFERENCES

- ¹Hagy GW, Settupane GA: Bronchial asthma, allergic rhinitis, and allergy skin tests among college students. *J Allergy* 44:323-32, Dec 69
- ²Hagy GW, Settupane GA: Prognosis of positive allergy skin tests in an asymptomatic population: A three year follow up of college students. *J Allergy Clin Immunol* 48:200-11, Oct 71
- ³Chafee FH, Settupane GA: Atmospheric pollen and mold surgery. *J Allergy* 35:193-200, May-June 64
- ⁴Buffum WP, Settupane GA: Prognosis of asthma in childhood. *Am J Dis Child* 112:214-17, Sep 66
- ⁵Salvaggio JE, Cavanaugh JJA, Lowell FC, et al.: A comparison of the immunologic responses of normal and atopic individuals to intranasally administer antigen. *J Allergy* 35:62-9, Jan-Feb 64
- ⁶Salvaggio J, Kayman H, Leskowitz S: Immunologic responses of atopic and normal individuals to aerosolized dextran. *J Allergy* 38:31-40, July 66
- ⁷Ishizaka K, Ishizaka T, Aerry WD: Antigenic structure of gamma-E-globulin and reaginic antibody. *J Immun* 99:849-58, Nov 67
- ⁸Johansson SGO: Raised levels of a new immunoglobulin class (IgND) in asthma. *Lancet* 2:951-3, 4 Nov 67
- ⁹Fisherman EW: Induction of immediate cutaneous reactivity to an antigen (*Ascaris*) in cancerous and noncancerous individuals. *J Allergy* 33:12-17, Jan-Feb 62
- ¹⁰Fischer JP, Connell JT: A study of immunological responses of a normal individual to injections of ragweed pollen emulsified in mineral oil adjuvant. *J Allergy* 34:250-7, May-June 63
- ¹¹Settupane GA, Newstead GJ, Boyd GK: Frequency of hymenoptera allergy in an atopic and normal population. *J Allergy Clin Immunol* 50:146-50, Sep 72
- ¹²Settupane GA, Boyd GK: Prevalence of bee sting allergy in 4,992 boy scouts. *Acta Allergol* 25:286-91, Aug 70
- ¹³Abrishami MS, Boyd GK, Settupane GA: Prevalence of bee sting allergy in 2,010 girl scouts. *Acta Allergol* 26:117-20, Apr 71
- ¹⁴Chafee FH: The prevalence of bee sting allergy in an allergic population. *Acta Allergol* 25:292-3, Aug 70

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A Case Of Encephalopathic, Myelopathic, And Peripheral Nerve Dysfunction In Folate Deficient Megaloblastic Anemia

Dramatic Response To Folic Acid Administration Supports Causal Relationship

By Gerhard C. Meier, M.D., Ph.D.

The association of pernicious anemia and neuro-myelopathy has been well established. In recent years evidence has been accumulating that a neurological disease resulting from folic acid deficiency may mimic exactly the neuropathologic and hematologic manifestations of vitamin B-12 deficiency. This report describes the course of such a case and the dramatic response to folic acid therapy.

CASE REPORT

This 45-year-old Caucasian female housewife was hospitalized with a chief complaint of extreme fatigue and swelling of both legs of 4 to 5 months' duration. The patient apparently was in her usual state of health until approximately 6 months prior to admission, when she noticed increased fatigability and weakness causing her to be sleepy and tired most of the time. She also noticed progressive swelling of both legs and discomfort and pain when walking. Over the same period of time she had experienced numbness in her legs and feet with occasional tingling. Her weight was 120 pounds one year prior to admission, but had increased to 155 pounds at the time of admission. The review of systems, with particular reference

to the gastrointestinal tract and the hematological system, was negative. Past and family history were non-contributory. She consumed one pack of cigarettes per day and at least three highballs per night, but possibly and most likely more. This may have been influenced by the fact that her husband worked a night shift and that the patient was usually drinking with her friends for entire evenings.

At the time of admission, the patient was pale, obese, alert but slow in action, speech, and thought. The following vital signs were recorded: temperature 99.4° F, blood pressure 110/70 sitting and 80/60 in the recumbent position, pulse 116/min and regular, respiratory rate 20/min. Height 5'2½", weight 155 pounds. The eyelids were puffy. There was minimal neck vein distension. A bruit was heard over the left carotid artery. The lungs were clear. A grade 1-2/6 systolic murmur was heard along the left sternal border. A sharp liver edge was felt just below the right costal margin, and 1+ presacral edema and 2+ pretibial pitting edema was present.

Neurological examination revealed a pleasant, cooperative, somewhat euphoric, middle-aged woman, who was alert but slowly responsive. She was oriented in the three major spheres. There

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were no signs of dysarthria, aphasia, or apractognosia. She displayed moderate impairment of digit retention and had difficulty recalling the name of the President of the United States. Her overall fund of knowledge appeared to correlate well with her educational background. Examination for cranial nerve defects disclosed no abnormality of the extraocular muscles or pupillary responsiveness. There was no evidence of ptosis, diplopia, or nystagmus, and no obvious visual field disturbance to gross confrontation. Fundic examination was unrevealing. The corneal responses were brisk. No facial asymmetry was noted. The gag reflex was easily elicited and the tongue was protruded in the midline. Cerebellar and coordination function was moderately impaired as evidenced by a moderate degree of dysmetria and loss of finger dexterity.

Muscle strength, tone, and bulk were deemed normal in all groups with the exception of the dorsiflexors of the toes, which displayed weakness. There was a considerable hypalgesia and hypesthesia in the lower limbs. Proprioception was impaired as well. The vibrations of a 128 c.p.s. tuning fork were not discerned by the patient until one ascended above the mid-thigh level. The position of the toes in space was not appreciated. The Romberg test was positive with the eyes closed and disclosed only a moderate truncal sway when vision was allowed. The reflexes were hypoactive throughout. The gait seemed less than optimal, but high stepping, slapping, and drifting were not noted.

Laboratory data. The hemoglobin was 4.2 g with a hematocrit of 12.7 per cent. The MCV 146, MCH 25.3, MCHC 33.8, and the WBC 3,600 with neutrophils 74, lymphocytes 21, basophils 1, myelocytes 1, metamyelocytes 1, nucleated red blood cells 1. The peripheral smear revealed poikilocytosis and anisocytosis with macrocytosis and polychromasia and marked hypersegmentation of neutrophils. Occasional schistocytes and tear drops cell were noted. The platelet count was 135 000. The reticulocyte count was 0.6 per cent, serum iron 370, and total iron binding capacity 416. Bone marrow was extremely cellular with a normal number of megakaryocytes. Proliferation of the erythroid series was megaloblastic. Giant forms of the erythroid precursors were seen with an immature nucleus accompanying a definitely more mature cytoplasm. The cytoplasm was extremely abundant in these cells. Many cells of both series were binucleate, and mitoses were prevalent. The

bone marrow clot was also hypercellular with an increase in stainable iron. The stool was negative for occult blood. The SGOT was 60 (normal up to 40), LDH 219 (normal up to 60). Total bilirubin 1.6 per cent; direct was not performed. The the following studies were normal or within normal limits: prothrombin time, BUN, total protein, albumin, alkaline phosphatase, SGPT, thyroxin, stool for ova and parasites, gastric analysis including free acid, sigmoidoscopy, gastroscopy, barium enema, upper gastrointestinal series and small bowel series, chest x-ray examination, and cultures of throat, sputum, blood, and urine. Subsequently the following tests were reported: Vitamin B-12 level 332 picograms/ml; folate level 2.0 nanograms/ml. Schilling test was 13 per cent and repeat was 24 per cent. Peripheral venous pressure 22 cm and arm-to-tongue circulation time (Decholin®) 10 seconds at the time of admission.

Hospital course. During hospitalization the temperature rose to 101.8°F during the first five days and returned slowly to normal thereafter. The pulse rate of 116/min on the day of admission decreased to 70/min on the fourteenth day and 80/min at the time of discharge when the patient was fully ambulatory. The patient was kept on bedrest and a 500 mg sodium diet with fluid restriction to 1200 ml during the initial four days of hospitalization. The weight of 155 pounds decreased to 151.5 pounds on the fourth day. Subsequently fluid intake was gradually liberalized, and the patient was allowed to ambulate. In spite of the normal Schilling test (13 per cent) the diagnosis of pernicious anemia was maintained on clinical grounds. The patient was treated with vitamin B-12, 1000 micrograms intramuscularly every other day for 5 doses, and at the same time with folate 5 mg t.i.d. per os because of her nutritional history. Results of serum folate and vitamin B-12 level were not known at that time. On this regimen there was gradual but progressive rise of hematocrit with an accompanying reticulocyte response as seen in the subsequent table.

	Hct	Hgb	Reticulocyte Count
1-07-71	12.7	4.2	0.6
1-14-71	16.6	4.6	21.5
1-17-71	22.3	6.2	18.0
1-24-71	29.2	8.8	5.6
2-01-71	36.5	11.3	2.8
2-04-71	36.2	11.1	2.0

(Continued on next page)

On the eleventh hospital day peripheral venous pressure was 10 cm. and the Decholin® arm to tongue time was 11 to 12 seconds. SGOT 59. LDH 104. On the twelfth hospital day the patient was also started on thiamine 100 mg p.o. t.i.d. Subsequent determination of SGOT and LDH on January 26, 1971 (nineteenth hospital day) were within normal limits. The patient was discharged on folate 5 mg p.o. t.i.d. to be followed in the hematological clinic.

Re-examination. When examined in the latter half of April 1971, the only residua were minimal stocking hypalgesia, hyporeflexia, and diminished vibratory sensation at the ankles. The personality and mental aberrations as well as the objective neurological signs had for the most part either completely cleared or been markedly attenuated.

DISCUSSION

This patient was admitted with diagnosis of macrocytic anemia characterized by a hemoglobin of 4.2 g and hematocrit of 12.7 per cent. Though there was no evidence of bleeding, urgent treatment was indicated. Upon completion of baseline blood studies, Schilling test, and bone marrow aspiration, therapy with vitamin B-12 was commenced, since no credence was attached to the normal result of the first Schilling test (13 per cent). This finding was considered to be due to fecal contamination of the urine specimen. While the diagnosis of pernicious anemia was adhered to on clinical grounds, folic acid was added to the regimen because of the patient's nutritional history. The Schilling test was subsequently repeated again with normal results (24 per cent) at which the results of the gastric analysis were also known. The final diagnosis of a folate deficiency megaloblastic anemia was confirmed by a markedly decreased folate level in the face of a normal vitamin B-12 level, indicating that the myelopathic and peripheral nerve dysfunction was secondary to folate deficiency.

Folate, like vitamin B-12, is an essential coenzyme in DNA synthesis for cell proliferation. Nutritional folate deficiency is not as rare as has been commonly assumed. It has been associated with increased cell proliferation of physiologic nature (pregnancy, lactation, premature birth, and infancy) or of pathological type (hemolytic anemia, leukemia and myeloproliferative disorders, ineffective erythropoiesis, extensive psoriasis, and others).⁴

Body folate stores will last only 3 to 6 months

after cessation of the supply of new folate, and serum folate levels will fall in little over a month.⁵ Folic acid deficiency is usually found in the "dedicated" alcoholic who deprives himself of folate containing foods by ingesting wine or whisky to the exclusion of food. We believe that the case here presented fits into this category. There is some evidence that folic acid is poorly utilized in the presence of alcohol, but the exact mechanism for this effect is unknown.⁶

The ingestion of certain drugs may also be associated with megaloblastic anemia — most frequently barbiturates and anticonvulsants. The precise mode of action of these drugs is uncertain, but according to some authors they probably precipitate megaloblastic anemia only when the patient is already folate deficient. There was no history of drug ingestion in our patient.

It has been suggested that these drugs interfere with the utilization of folic acid.¹ Jensen and Olesen mention several hypotheses, including interference with folate coenzyme formation and function, interference with folic acid absorption, displacement of folic acid from its carrier plasma protein, and finally mild stress on folic acid through the increased parahydroxylation process due to the metabolism of anticonvulsant drugs.⁷

Clinical features of peripheral neuropathy, spinal cord disease, or both, have been demonstrated by Grant et al.² in seven patients, by Hansen et al.¹ and by Robertson et al.³ with uniformly gratifying results after folate therapy. Strachan and Henderson⁸ described two patients with advanced dementia in whom marked improvement or return to normalcy ensued after treatment. An isolated defect of folic acid absorption associated with mental retardation and cerebral calcification has been reported by Lankowsky et al.⁹

There is, in addition, histopathologic evidence of cerebral, cerebellar, and combined degeneration of spinal cord and spinal root pouches^{1,3} associated with folic acid deficiency.

SUMMARY

A case is reported in which encephalopathic, myelopathic, and peripheral nerve dysfunction associated with megaloblastic anemia dysfunction responded to folic acid administration. It supports evidence in the literature that neuromyelopathy associated with megaloblastic anemia may be due to folic acid deficiency.

(Continued on Page 40)

Editorials

CHARLES P. WILLIAMSON

Almighty God we give thee high praise and hearty thanks for the life of Charles P. Williamson. We remember his zest and joy in living, his ageless enthusiasm whether in handling deftly an overhand in tennis or in unravelling a principle of law. We give thanks for the sympathy by which he bridged all differences of age. Dear, beyond words, to all his immediate family, to the larger family of four generations he was also dear, a companion and contemporary.

We rejoice in the gallantry of his Christian service whether as an Army officer on Anzio Beach, as a public servant of his state and city, or finally as a loyal and informed churchman and the Chancellor of his diocese. We remember the gifts of mind and personality by which weighty matters were handled without ostentation and with apparent ease. Above all we give thanks for his utter simplicity, his genuine affection for people of every

kind, by which the best in men was encouraged, differences mitigated, and often reconciled.

We recognize better what Jesus meant, "By this all men know that ye are my disciples, that ye love one another".

Rest eternal grant unto him, O Lord, and let light perpetual shine upon him.

REVEREND JOHN CROCKER
ANDOVER, MASSACHUSETTS

DECEMBER 14, 1972

* * *

Mr. Williamson was legal counsel and good friend of the RHODE ISLAND MEDICAL SOCIETY and the PROVIDENCE MEDICAL ASSOCIATION for many, many years. The tribute at his funeral by Reverend John Crocker, former Headmaster of Groton School, reflects the fine qualities that endeared Charlie Williamson to the physicians throughout the State.

HEXACHLOROPHENE

Effective September 27, 1972 all products containing hexachlorophene, (HCP) were banned from over-the-counter sales in the United States. Existing stocks of products containing less than 0.75 per cent HCP, mostly toilet soaps, may still be sold, but no further production is permitted. Baby powders containing HCP were all immediately recalled. Controlled use of HCP available by prescription under medical supervision is permitted.

HCP, a chlorinated phenol derivative has been used as a topical bactericidal agent for the past twenty years. It has two significant advantages over related compounds; first, it is much less irritating, although sensitivity has been reported; and second, it remains active in the presence of soap.

In 1952, HCP in 3 per cent emulsion was reported to reduce significantly staphylococcal nursery infections. It was rapidly introduced for hand washing of nursery personnel and total body washing of the neonate. Coincidentally, the epidemic of nosocomial staphylococcal infections rapidly waned to its present relatively low level. HCP in lesser concentration was soon added to many com-

mercial "deodorant" soaps and other toilet articles.

In 1970 it was noted that rats fed HCP developed cerebral edema and cystic degeneration of the brain and spinal cord. Blood levels, determined in infants given daily baths in 3 per cent HCP, were nearly 50 per cent of those associated with neurotoxicity in the rat. In 1971 it was reported that newborn monkeys, washed daily with one ounce of 3 per cent HCP and then rinsed, uniformly developed extensive lesions of the brain and spinal cord after 90 days of washing. The American Academy of Pediatrics responded and recommended that routine daily bathing with HCP be stopped. If an outbreak of staphylococcal infection should occur (and there was a rash of reports of staphylococcal disease in the neonatal period when the HCP bathing was stopped), then a short period of daily bathing could be reintroduced.

This is the situation today. The present recommendations seems reasonable. Reevaluation will be in order as further information is forthcoming.

(Continued on next page)

AMA - ERF

The Woman's Auxiliary of the Rhode Island Medical Society has consistently performed yeoman work in helping medical education through the American Medical Association Education and Research Foundation. The Auxiliary has been especially concerned this year with two money-raising projects for the AMA-ERF: funds for medical schools and the student loan guarantee program.

Medical schools continue to be in desperate need of contributions. The demand for health services far surpasses the supply of trained personnel. The cost of providing quality medical education, larger facilities, and additional equipment amounts to an astronomical figure. Capable young people are being turned away because of inadequate facilities to handle them. The discouraged turn to other fields. Even schools with large endowments and federal aid are facing financial belt-tightening because their funds are often earmarked for special projects. This is where ERF comes into the picture. It provides flexible financial aid for use in solving the school's most pressing financial problems.

The second and equally alarming area of concern is the financial plight of the medical student. Although the federal government is pouring millions of dollars into loans for students, the funds are not limitless. The Department of Health, Education and Welfare reports that only a limited number of medical students can receive federal aid

and that additional help must come from private sources. The AMA-ERF program is as comprehensive as the government's, since it includes residents and interns as well as medical students, some of whom have families to support.

The average medical student is not rich. A recent study indicates that nearly 1,200 of the total medical student population come from families with a gross annual income of less than \$12,000. ERF funds insure loans by guaranteeing repayment to the banks involved.

It is significant that the AMA-ERF Board of Directors is also the Board of Trustees of the American Medical Association. Staff duties are performed by the various divisions of the AMA. The total amount of funds collected is forwarded to the medical schools chosen by the contributor or is equally divided among all medical schools when no schools are specified.

The Woman's Auxiliary in Rhode Island from June 1, 1971 to May 31, 1972 collected the respectable sum of \$1,823.84.

Contributions to this most worthy project can be forwarded to AMA-ERF, 535 North Dearborn Street, Chicago, Illinois, 60610. Physicians may specify the name of the medical school to be the beneficiary. Proper acknowledgement will be made by the medical school to the doctor.

The Woman's Auxiliary deserves full support in this most worthy task.



MANUSCRIPTS

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
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Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

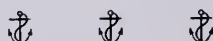
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three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g.,

¹Doe J, Blank RS: New approaches to . . . **Rhode Island Med J** 92:100-110, Feb 80

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References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.



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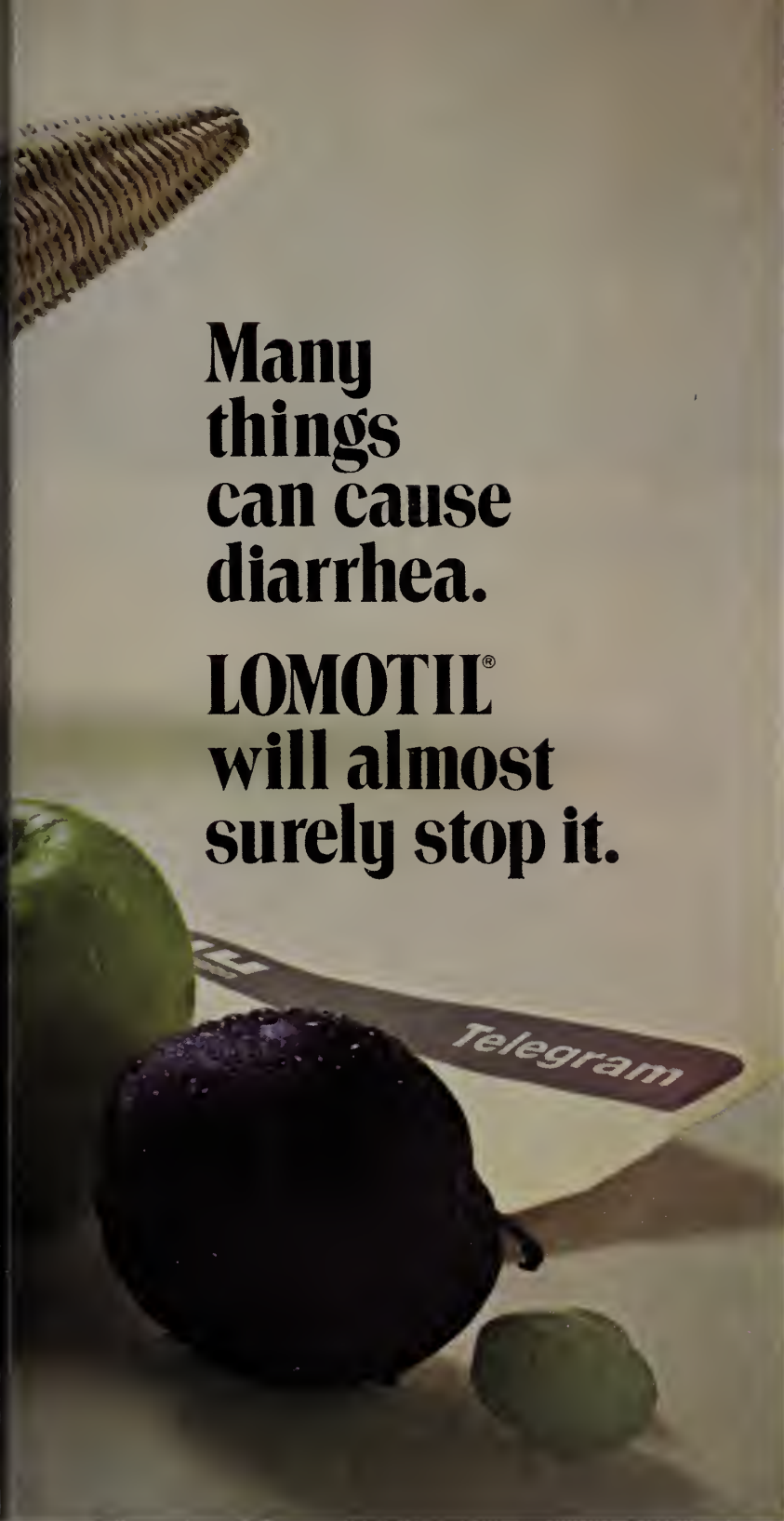
Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the

breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage not exceed recommended dosages. Administer caution to patients receiving addicting drug known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage. Strictly observe contraindications, warnings and cautions for atropine; use with caution in children since signs of atropinism may occur even with recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy.



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ia, restlessness, euphoria, pruritus, angioneu-
dema, giant urticaria and paralytic ileus.

Contraindications and administration: *Lomotil is contraindicated in children less than 2 years old.* Use only liquid for children 2 to 12 years old. For children 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 2 mg. q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 daily; adults, two tablets (5 mg.) t.i.d. to two (5 mg.) q.i.d. or two regular teaspoonfuls (10 mg.) q.i.d. Maintenance dosage may be as one fourth of the initial dosage. Make dosage adjustment as soon as initial symptoms are controlled.

Warnings: Keep the medication out of the reach of children since accidental overdosage may cause even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hyporeflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur

12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: *Tablets*, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

Dosage forms: *Tablets*, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.



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Clinical Data:

Patient: 47-year-old male.

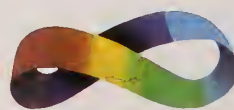
Diagnosis: Severe pyoderma, left hand.

Culture: *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

Temperature: 102° F

Therapy: MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

Concomitant therapy: None.†



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Minocycline is a tetracycline with activity against a wide range of gram-negative and gram-positive organisms.

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Warnings: The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower doses, and in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. Pregnancy. In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class. Safe

use has not been established in children under 13.

Precautions: Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

Adverse Reactions: (Common to all tetracyclines, including MINOCIN) GI: (with both oral and parenteral use): anorexia, nausea, light-headedness, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

NOTE: Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that MINOCIN is not notably influenced by foods and dairy products.

*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.

†Case Report, Clinical Investigation Department, Lederle Laboratories



District Medical Society Meetings

NEWPORT COUNTY MEDICAL SOCIETY

The regular meeting of the Newport County Medical Society was held on October 25, 1972 at the Pier Restaurant, Newport. There were 27 members and eight guests in attendance.

Dr. Robert V. Lewis, President of The Rhode Island Medical Society, explained RIMPAC's organization, purpose, and function and its role in influencing health legislation in Rhode Island. He also complimented the District Society on the good job that its various members on the State Society Committees were doing.

A panel of speakers then discussed the "Current Crises in Medical Malpractice". Dr. Nathan Chaset, Chairman of the Mediation Committee of The Rhode Island Medical Society, described various approaches used toward mitigating the problem of malpractice. Mr. Kirk Hansen, attorney retained by the St. Paul Insurance Group and other firms to defend doctors in malpractice suits did not think that there was a crisis — at least in Rhode Island. He provided the membership several pointers in reducing the personal rate of malpractice suits. He said that there were 40 malpractice cases under litigation in his office at present: five years ago this number was 15. Of the current 40, three, he related, were clearly liability, seven or eight were questionable but possible, the remaining will probably go to the jury but probably without result. Atty. Matthew Faerber spoke very briefly as the devil's advocate.

There was a brief business meeting following the program at which time Doctors Richard Zuer-ner, Nasser, and Chahmirzadi were voted into the Newport County Medical Society.

The meeting was adjourned at 11:30 p.m.

Respectfully submitted

HOWARD S. BROWNE, M.D.
Secretary

PROVIDENCE MEDICAL ASSOCIATION

A meeting of the Providence Medical Association was held jointly with the Rhode Island Chapter, American Society of Internal Medicine, at the Kirkbrae Golf Club in Lincoln, Rhode Island on Tuesday, April 11, 1972.

The meeting was a dinner meeting which was preceded by a cocktail hour. One hundred and twenty-eight doctors and wives attended.

Dr. Joseph E. Caruolo, President of the Association, extended greetings to the membership at the formal program after dinner, and Dr. Donald P. Fitzpatrick, President of the Internal Medicine group, introduced the speakers for the panel discussion on "New Approaches to Ambulatory Medical Care".

Dr. Martin Posner, Medical Director of the Rhode Island Group Health Association, gave a brief resume of the history of that organization and he discussed its present operation and future plans.

Dr. Charles E. Millard, of Bristol, R. I., spoke of the role of the Medical Associates of Bristol County, Inc. in ambulatory medical care through its "MediGroup" program which started on May 1, 1972. He outlined the plan of the private group, its affiliation with Blue Cross-Blue Shield, and he then discussed his views on issues involving the delivery of medical care.

Dr. Joseph A. Chasan, Medical consultant to the Providence Health Centers, Inc., reviewed the work of that organization in bringing better health

(Continued on next page)

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Dr. Melvin D. Hoffman, past president of the R. I. Chapter, American Society of Internal Medicine, gave an excellent talk on the future patterns of medical care and the importance of individual and solo private practice.

Dr. Herbert P. Constantine, Director of ambulatory care and community medicine at Rhode Island Hospital, discussed possible roles of the hospital in an expanded program of ambulatory care, with particular reference to the new ambulatory care building that is being erected at Rhode Island Hospital.

The presentations were well received by the interested audience.

The meeting was adjourned at 10:15 p.m.

Respectfully submitted:

JOHN E. FARRELL, SC.D.

Executive Secretary

for

GEORGE V. COLEMAN, M.D.

WASHINGTON COUNTY MEDICAL SOCIETY

The quarterly meeting of the Washington County Medical Society was held at the Elm Tree Inn on April 12, 1972.

The meeting was called to order by Dr. Gregory M. Burbelo, President, at 11:35 a.m. Members present were Doctors: F. Bruno Agnelli, Gregory M. Burbelo, Sylvester A. Capalbo, Pasquale J. Celestino, Robert L. Conrad, Richard F. Judkins, Robert E. Knisley, Valentin P. Klymenko, Richard J. Kraemer, Louis LaPere, Attilio L. Manganaro, Johanna E. Mohnheim, John L. MacIver, William H. McDermott, James A. McGrath, Louis A. Morrone, Joseph J. O'Neill, Francis M. Palaia, John D. Pinto, Mildred Robinson, Joseph L. Ruisi, Douglas Rayner, Ziang Tsien Tang, Juliana R. Tatum, John J. Walsh, John P. Wood, and Pauline B. Wood.

COMMUNICATIONS

Several communications were read along with several applications which were turned over to the Credential Committee to be acted upon in New Business.

COMMITTEE REPORTS

1. Doctor Agnelli reported from the Council about various legislation being discussed.

Doctor Agnelli suggested that the secretary write to Mr. Farrell, Executive Secretary of the

Rhode Island Medical Society, about revising the list of members of the Society.

2. Doctor McDermott gave a financial report with a balance of \$804.81.

OLD BUSINESS

There was no old business.

NEW BUSINESS

1. The Credentials Committee approved the applications of Dr. Richard Bromberg and Dr. Robert Rosenfeld, and the membership acted favorably on them.

The Credentials Committee also approved the applications of Doctors: Robert O'Neil, James Murdocco, and George Hambly, pending their active residence and practice in the county. The membership accordingly approved this action.

2. The membership requested the secretary to write to Mr. Farrell regarding bylaws of other county societies so that an active bylaws committee can attempt to write a new set of bylaws for our Society.

3. Doctor Tatum reported that the new building of the Mental Health Clinic was ready to open, and an Open House would be held. All members were invited to attend and view the facilities.

The meeting was adjourned at 12:30 p.m.

Dr. Johannes Virks discussed the Tri-State Regional Medical program being carried on under his direction.

Respectfully submitted:

FRANCIS M. PALAIA, M.D.

Secretary



DERMAQUIZ ANSWER

(See Page 4)

Left, a common benign mole, in an unusual location.
Right, a basal cell carcinoma.



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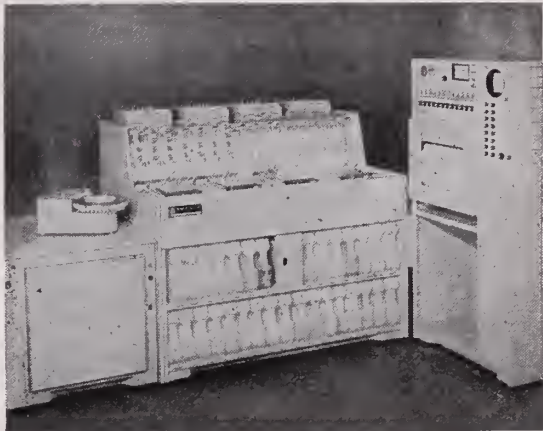
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Peripatetics

Members are urged to notify the executive office of items of professional or personal interest for publication in this column.

LOUIS A. LEONE, director of cancer research, was elected President of the Rhode Island Division of the American Cancer Society at the division's recent annual business meeting. THOMAS PERRY JR. was named Vice-President. PAUL CALABRESI, director of medicine at Roger Williams Hospital who is chairman of the professional education committee for "cancer dialogue" held earlier this year, was presented an award.

* * *

ROBERT P. SARNI was installed recently as president of the medical staff association of St. Joseph's Hospital. Doctor Sarni succeeds Leland W. Jones who was the association's first president after the merger of St. Joseph's and Our Lady of Fatima Hospitals.

Installed as president-elect was ALLAN A. DESIMONE, secretary, RICHARD TESTA; treasurer, ANTHONY MERLINO.

Members at large elected to the staff's executive committee were ROBERT INDEGLIA and ANTHONY GUGLIELMI.

SUMNER I. RAPHAEL has been elected president of the Medical Staff Association at Providence Lying-in Hospital. Other officers elected were HERBERT EBNER, vice-president; MARIO VIGLIANI, secretary; and STANLEY T. GRZEBIEN, treasurer.

* * *

PATRICIA WOLD is the President of the Rhode Island District Branch, American Psychiatric Association. HUGO TAUSSIG is President-elect. DORIS E. BERGER is Secretary-Treasurer. The councillors are CHARLES C. GOODMAN, FRANK W. SULLIVAN, and JACQUES MIONI; delegates are HECTOR JASO and HUGO TAUSIG. Editor is LOUIS V. SORRENTINO.

* * *

RUDOLPH W. PEARSON has been re-elected President of the Rhode Island Otolaryngological Society; THOMAS R. LITTLETON, was renamed vice-president; and MARY D. LEKAS, secretary-treasurer. Doctors Pearson and Lekas were elected to serve for their third consecutive terms.

* * *

New officers of the Rhode Island Section of the American College of Obstetricians and Gynecologists are SUMNER I. RAPHAEL of Providence, Chairman, and GEORGE W. ANDERSON of Providence, Vice Chairman. They were elected to three year terms.

* * *

ORLANDO M. ARMADA was recently elected president of the medical staff of Roger Williams General Hospital. Doctor Armada replaces Dr. Leroy Chapnick. Other officers elected were: WILLIAM S. KLUTZ, vice president; A. VINCENT DeROBBIO, secretary; and JOSEPH P. PESARE, as a member of the executive committee.

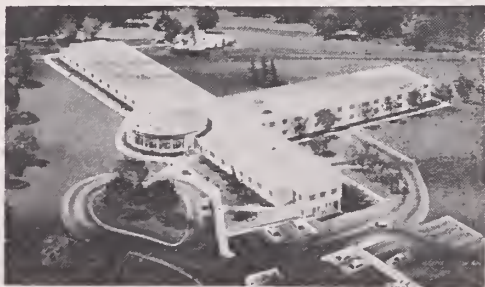
* * *

The following physicians were elected to the active staff at Rhode Island Hospital: SUBHASH C. BAJAJ, Division of Gastroenterology, Department of Medicine; JOSEPH P. LOMBARDOZZI, Medicine; ANTHONY R. MANOCCHIO, Gynecology; E. UNG CHOI, Gynecology; HAROLD A. FALCONER, Pediatrics; WILLIAM H. McDERMOTT, Pediatrics; CHARLES J. ASHWORTH, JR., Surgery; and ROBERT J. CAPONE, Medicine. Appointed to the courtesy staff was RONALD J. CAVANAGH, Psychiatry.

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A Reminder About Blue Shield Fee Changes

The Professional Advisory Committee of Rhode Island Blue Shield has asked that each physician be reminded of the appropriate methods for accomplishing fee changes for both Federal Medicare and Blue Shield Programs.

FEDERAL MEDICARE

Medicare regulations require that revisions in usual charges be developed from, and supported by, actual charges reported on Medicare claim forms (1490's) over a period of time.

Therefore, it is important that a physician who makes a change in his charges to all patients (not just Medicare patients) reflects these revised charges on all claims submitted (both Medicare and Blue Shield) as soon as the changes are effective. It is important to restate that a physician should always record what his *actual* usual charges are for a given service or procedure. What Medicare (or Blue Shield) pays, and what a physician agrees to accept (by assignment under Medicare or participation in Blue Shield) should have no bearing on the recordation by a physician of the actual usual charges he is making.

Stated simply, under Medicare, usual charges are developed from charge data reported on claims, and are not affected by what is paid to or accepted by the physician. Of course, inaccurate reporting of actual usual charges or the reporting of charges that indicate substantial increases over previous charges will tend to invalidate the reported data, and indeed, the entire system of developing "reasonable" charge criteria.

BLUE SHIELD

Whenever you feel that a fee change is necessary, you should write to the Professional Advisory Committee at Blue Shield giving the following information:

- 1) The services or procedures affected by the charge, identified by the Physicians' Services Index (P.S.I.) code number.
- 2) The charges presently listed on your individual profile.
- 3) The new charge for each service.

Whenever these charges become effective for non-Blue Shield patients, you should also reflect the new charges on all Blue Shield claim forms, even though Blue Shield will not immediately begin paying the new charges.

Approximately ninety days before an annual rate review, all such requests on file will be reviewed and used to recalculate the prevailing levels of charges for Rhode Island. Those requests which fall within the recalculated prevailing levels will then be made part of the next rate filing for Blue Shield. Approved changes will be effective at the beginning of the subsequent rating year.

Should you have any additional questions on this matter, please feel free to call the Professional Relations Department at Rhode Island Blue Shield.

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BOOK REVIEWS

(Continued from Page 12)

meanings and interpretations. Table 2, which describes psychological test characteristics of psychiatric patients, is remarkable. At least seven illnesses or conditions are listed and for each are described various characteristics with reference to the various tests including the Wechsler, the Rorschach, the TAT and the MMPI. The chapter on *Psychodynamics* presents a table which can be used for quick reference, correlating age with stage development and what the author calls "issues", meaning behavior characteristics. There are 21 mechanisms of defense listed and described which could prove extremely helpful to the inexperienced. In the following chapter the author describes, in general terms, symptoms of psychiatric disorders and again, allowing for brevity, the clarity in defining such concepts, broadly, is truly remarkable. Again this is excellent for frequent reference.

Part II deals with *Clinical Syndromes*. First the author speaks of the problem of classification. After listing the usual ten broad categories of the current *American Psychiatric Association Standard Nomenclature*, the author makes a highly accurate statement, "The exact categorization of an individual case is so fraught with difficulty as to ap-

pear impossible. If followed over a period of time the patient may seem to pass from one diagnostic category into another". Nevertheless, "— however, categorization of mental disorder proves useful in estimating the types of risks and problems likely to be encountered in planning therapy and in judging prognosis". All this is done in 3½ pages. The next ten chapters, which essentially are all of Part II, contain detailed descriptions of the various *disease entities* of all ten categories. The group of *Organic Brain Syndromes*, psychotic or non-psychotic, appears to be increasingly important today. The three pages on *Neurosyphilis* are quite elucidating. I might have expected a statement on Psychosis with epidemic or unspecified encephalitis which has been seen and misdiagnosed as schizophrenia. The author's comments on *Psychosis with Epilepsy* pertain to the epileptic personality, where schizophrenia may occur. Psychosis with degenerative disease of the central nervous system includes Huntington's chorea, Wilson's disease, multiple sclerosis, and others. Quite worthwhile are the two paragraphs on *brain trauma*, discussing what the author means by "concussion", and, particularly the second paragraph. Psychosis with pernicious anemia, Parkinson's, pellagra, and porphyria are mentioned. The statements on barbiturate intoxication have perhaps special relevance today, especially in the management of overdose. I personally disagree with the placing of Psychosis with Childbirth in the category of *Psychosis Associated with Other Physical Disorders*, especially since it is acknowledged that of the specific reactions, 30 per cent are schizophrenic, 20 to 25 per cent are schizoaffective, 20 per cent manic, 50 per cent depressive, and 10 per cent "toxic". Even by these figures most are likely "functional". The author, however acknowledges the *stress of responsibilities* in psychosis surrounding childbirth. In the non-psychotic organic brain syndrome the author omits much, quite understandably, except for an excellent discussion of "the epilepsies" or "convulsive disorders". Forty per cent of all persons with grand-mal seizures have relatively normal EEG's during *interseizure*". The treatment of the epilepsies is excellent.

The next large group is *Psychoses Not Attributed to Known Physical Conditions*. The implication here is that these conditions are nevertheless somehow organically caused. On this point there is an opposing view, which conceptualizes these

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disorders as "functional", a term which as used would seek to connote, among other things, non-organicity. The main groups included here are the *major affective disorders* such as involuntional melancholia, the manic-depressive illnesses, psychotic depression and, of course, all of the schizophrenias and the paranoid states. The author points out that the likely causes of these psychoses involve constitutional (physiological, biochemical) and psychosocial factors. It is interesting that he does not speak of "intrapsychic" factors. He makes the point that the so-called "affective" as well as "thinking disorders" both have really "meaningful related disturbances of both affect and cognition". In discussing the "affective disorders", the author does a superb job of describing clinical symptoms, clinical course, prognosis, and treatment. He is quite liberal with the use of electroshock treatment, as well as anti-depressant drugs. With regard to the schizophrenias the author devotes fourteen pages to this group. He notes that 25 per cent of all hospital beds are occupied by this condition. His presentation of the "cream" of all types of schizophrenias, as well as examination, prognosis, and treatment, is masterly.

With regard to the *Neuroses*, the theory that anxiety (the basis of neurosis) originates from early sexual events such as "observing parents in the sexual act" or that "girls lack a penis" is really only a theory and not necessarily correct. The author discusses eight neuroses concisely and helpfully. He treats the hysterias very well. I doubt that all would agree with the assertion that electroshock is not indicated (at times) in the obsessive-compulsive neuroses. He notes that suicide can occur in *neurotic* depressions! *Depersonalization neurosis* appears to be a vague concept, and, although depersonalizations do occur, it is difficult to judge whether neurotic or psychotic mechanisms underly them. The description (as is the condition) of hypochondriacal neurosis appears vague.

Under *Personality Disorders and Certain Other Non-Psychotic Mental Disorders*, the author concisely describes ten abnormal personalities in about two pages, again excellent for reference. One should note that these conditions consist of "relatively fixed habitual attitudes and reaction (behavior) patterns". It is again interesting that sexual deviations (approximately 16 types) are defined in about one page and, further, together with alcoholism and drug addiction are all classified in this category. Two pages are devoted to alcoholism

and seven pages to drug dependency. Here again the author gives the "cream" of the subject in concise and easy reference manner. His definitions of dependence, habituation, addiction, and tolerance, as well as the "colorful" terms which addicts use, is extremely useful.

In the section on *Psychophysiological Disorders* eleven pages are devoted to the various systems including skin, musculoskeletal, respiratory, cardiovascular, hemic and lymphatic, gastrointestinal, genito-urinary, endocrine, and special sense systems. The *Transient Situational Disturbances* are described as "adjustment reactions" to overwhelming environmental stress occurring in psychologically healthy persons, and symptoms usually recede as the stress diminishes. I would quote two very important observations here: "A proper preparation for dealing with strong emotions and health matters is a responsibility of home and school as is the development of a personal supporting life philosophy. *The balance of adequate support without the development of too much protection and dependence is a difficult parental task*". Under this heading are described adjustment reactions of infancy, childhood, adolescence, adult life, and later life.

(Continued on next page)

INTER NOS . . .

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The next group, *Behavior Disorders of Childhood and Adolescence*, comprises essentially child psychiatry. Parental rejection, overprotection, overstimulation, overpermissiveness, overindulgence, and overcontrol are all contributory factors. The important conditions here include hyperkinetic, withdrawal, overanxious, runaway, and unsocialized-aggressive and (finally) group delinquent reactions. The final group of disorders is *mental retardation*. This field is a specialty of its own. There are listed at least 60 different types.

Finally, in *Part III*, the book takes up the discussion of therapy. Here the *therapeutic team* consisting of psychiatrist, collaborating physician, social worker, psychologist, nurse, occupational therapist, and pastoral counselor is described. In general, the section on therapy includes *individual psychotherapy*, *group therapy*, the various *physical therapies*, *psychosurgery*, and *chemotherapy*. Individual psychotherapy includes interview, goals, and techniques. An important observation relates to the therapist seeking to help the patient arrive at and actually see his own meanings and understandings, and of course to make his own decisions. The doctor-patient relationship utilizes various theoretical orientations i.e. psychoanalytical, psychobiological, Rogerian, Jungian, Adlerian, Rank, Horney, learning theory, hypnosis, reciprocal inhibition, and finally "brief" psychotherapy. *Group therapy* consists of various types. Under *Physical Therapies* the main ones to be noted include electroshock, insulin, and electrosleep. There are others of lesser importance. *Psychosurgery*, which seems to be making a (heatedly controversial) comeback, is discussed. *Chemotherapy* of course is discussed with several helpful tables describing the various main groups of drugs such as tranquilizers, antidepressants, and others. In concluding the book there is a brief statement on such problems as *Management of Suicidal Patients*, *Military Psychiatry*, *Forensic Psychiatry* and finally *Community Psychiatry*. Certainly, by and large these statements are handy and helpful. It should be noted that the so-called *Durham test of insanity* is outdated, as of very recently. There are here a number of views which are at least controversial.

In conclusion, in spite of the fact that changes are occurring in psychiatry as in other fields and institutions today, there is no doubt that this synopsis is an accurate presentation of the predominant, generally accepted view of modern contemporary Psychiatry. Naturally the changing

views — some quite radical — are necessarily not treated in this book. but in no way does this detract from it particularly, because such views are apparently in the minority and, further, are likely to prove invalid. I have in mind, quickly, certain views regarding *sexual deviations* and other views regarding *suicide*, a subject one hears about with increasing frequency today. The book is entirely worthwhile, although it does not pretend to be a substitute for a standard *unabridged* modern textbook of psychiatry, which quite naturally elaborates on all of these various topics in much greater (and interesting) detail. It can be highly recommended for that large group of professionals, medical and non-medical, who want to know or review quickly what psychiatry is all about.

DOMINIC L. COPPOLINO, M.D.



A CASE OF ENCEPHALOPATHIC MYELOPATHIC, AND PERIPHERAL NERVE DYSFUNCTION IN FOLATE DEFICIENT MEGALOBlastic ANEMIA

(Concluded from Page 30)

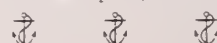
REFERENCES

- ¹Hansen HA, Nordqvist P, Sourander P: Megaloblastic anemia and neurologic disturbances combined with folic acid deficiency. *Acta Med Scand* 176:243-51, Aug 64
- ²Grant HC, Hoffbrand AV, Wells DG: Folate deficiency and neurological disease. *Lancet* 2:763-7, 16 Oct 65
- ³Robertson DM, Dinsdale HB, Campbell RJ: Subacute combined degeneration of the spinal cord. *Arch Neurol* 24:203-9, Mar 71
- ⁴Nutritional folate deficiency. (Leading Article) *Brit Med J* 2:377-9, 18 May 68
- ⁵Herbert V: Biochemical and hematologic lesions in folic acid deficiency. *Am J Clin Nutr* 20:562-68, Jun 67
- ⁶Beale PJ, Parry ES: Megaloblastic anaemia associated with alcoholism. *Proc R Soc Med* 62: 527-31, Jun 69
- ⁷Jensen ON, Olesen OV: Folic acid and anticonvulsive drugs. *Arch Neurol* 21:208-14, Aug 69
- ⁸Strachan RW, Henderson JC: Dementia and folate deficiency. *Quart J Med* 36:189-204, Apr 67
- ⁹Lanzkowsky P, Erlandson ME, Bezan AI: Isolated defect of folic acid absorption associated with mental retardation and cerebral calcification. *Blood* 34:452-65, Oct 69

Addendum:

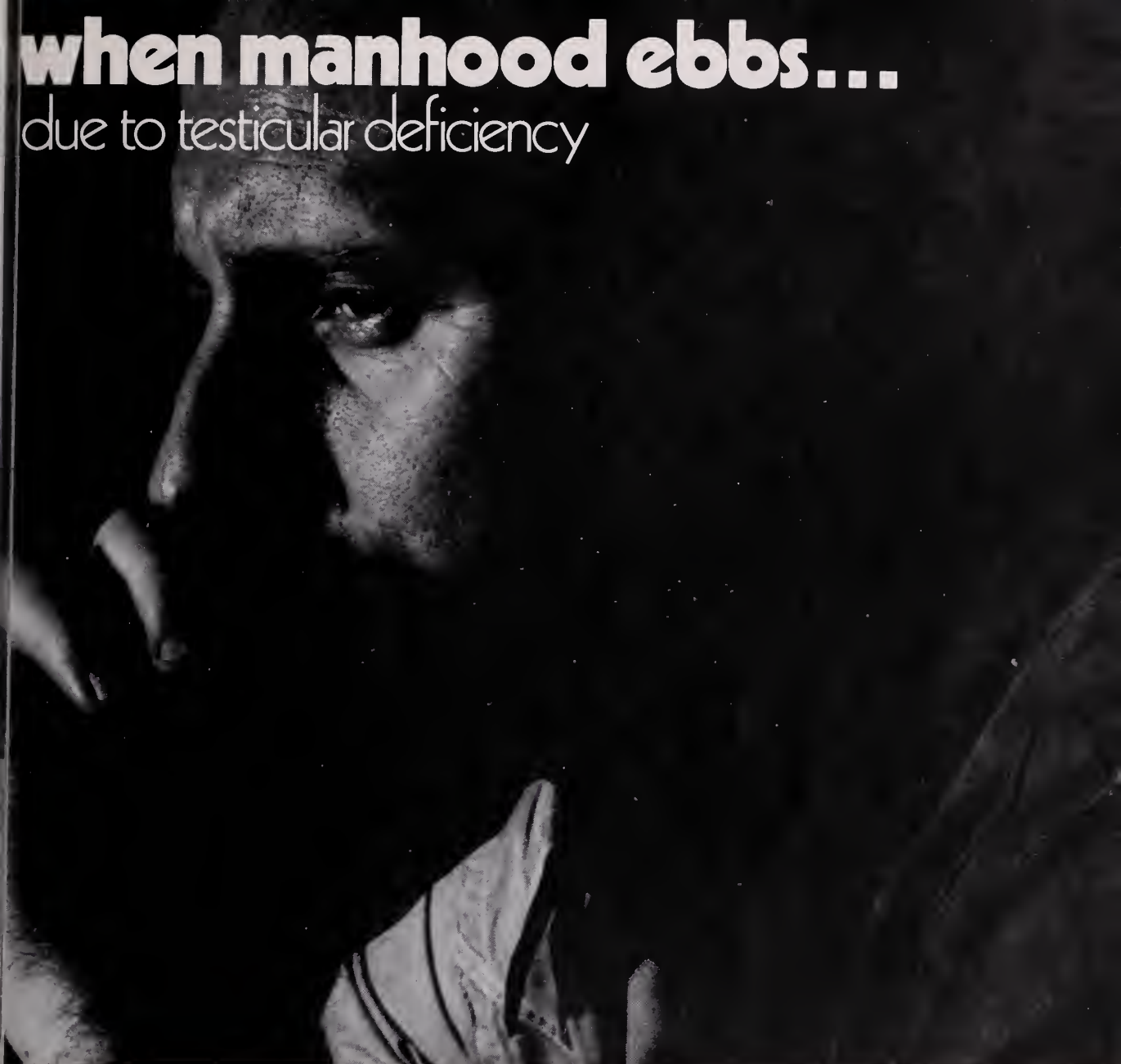
After submission for publication the report of a case with striking similar features came to our attention Pineus JH, Reynolds EH, Glaser GH: System degeneration with Folate deficiency. *JAMA* 221:496-7, 31 July 72.

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tated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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BALCONY

February 1973

Vol. 56, No. 2





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Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Rhode Island Medical Journal

February, 1973

Volume 56, No. 2

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MEDICAL EVENTS CALENDAR

Wednesday, March 7, 1973

ANATOMY OF MENISCI AND LIGAMENTS OF THE KNEE

A. A. Savastano, M.D.

Surgeon-in-Chief,

Department of Orthopedic Surgery and Fractures

Rhode Island Hospital

Rhode Island Hospital

8th Floor Conference Room

1:00 p.m.

Friday, March 9, 1973

**STUDIES LEADING TO THE DETECTION OF TWO ONCO-
GENIC HERPESVIRUSES OF MONKIES**

Dr. Ronald Hunt

New England Regional Primate Research Lab

Southborough, Massachusetts

Brown University

Wilson Hall, 102

4:00 p.m.

Saturday, March 10, 1973

HEPATIC TRAUMA AND TUMORS

Seymour I. Swartz, M.D.

Professor of Surgery

University of Rochester School of Medicine and

Dentistry

Rochester, New York

Rhode Island Hospital

George Auditorium

10:00 a.m.

Monday, March 12, 1973

**KIVEN ORATION — THE ARTERY WALL CELLS AND THE
PATHOGENESIS OF ATHEROSCLEROSIS**

Robert W. Wissler, M.D., Ph.D.

Donald N. Pritzker

Professor, Department of Pathology

The University of Chicago

The Miriam Hospital

Sopkin Auditorium

8:15 p.m.

Friday, March 16, 1973

ACTOMYOSINS AND CYTOPLASTIC STREAMING

Dr. Vivian M. Nachmias

Haverford College

Haverford, Pennsylvania

Brown University

Barus and Holly 168

4:00 p.m.

MEDICAL EVENTS CALENDAR

Saturday, March 17, 1973

**DIAGNOSTIC CONSIDERATIONS IN THE HYPERTENSIVE
PATIENT**

Aram V. Chobanian, M.D.
Professor of Medicine
Boston University School of Medicine
Boston City Hospital
Boston, Massachusetts

Rhode Island Hospital
George Auditorium
10:00 a.m.

Saturday, March 24, 1973

**TREATMENT OF CANCER OF THE RECTUM BY
ELECTROCOAGULATION**

John L. Madden, M.D.
Director of Surgery
St. Clare's Hospital and Health Center
New York, New York

Rhode Island Hospital
George Auditorium
10:00 a.m.

Friday, March 30, 1973

LECTURE SERIES

Dr. S. Kalter
Director
Southwest Foundation for Research and Education
San Antonio, Texas

Brown University
Wilson Hall 102
4:00 p.m.

Saturday, March 31, 1973

**RECENT TRENDS IN THE DIAGNOSIS AND TREATMENT OF
ACROMEGALY**

Hannibal Hamlin, M.D.
Chief, Neurosurgical Clinic
Massachusetts General Hospital,
Associate Neurosurgeon,
Beth Israel Hospital

Rhode Island Hospital
George Auditorium
10:00 a.m.





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A Message from the Dean

AMERICANS STUDYING MEDICINE ABROAD

For over half a century American medical schools have been unable to accommodate all qualified applicants. At least since the end of World War II they have additionally failed to provide this country with the number of physicians it needs. A major effort to offset this deficit started in the late 1950's. As a result, in September 1972, close to 13,000 first year medical students were admitted to 114 United States medical schools, a 60 per cent increase in enrollment over the decade of 1962-72. However, this still appears insufficient since, during the same period of time, the number of foreign medical graduates attracted every year into the United States medical pool rose from 1,500 to about 4,500.

Such considerations have long been a part of life in our own Rhode Island microcosm. On the one side, throughout the sixties we have depended on foreign medical schools to train almost one half of the newly licensed physicians in this state. On the other side, our young premedical students have been very much aware of the fact that the route to an M.D. degree must often pass through the university facilities of Bologna, Padua, Montpellier, Louvain, or Guadalajara.

Organized medicine and organized medical education have not yet faced this issue squarely. In spite of their recent efforts, the problem seems to grow worse rather than better since, according to the above statistics, the United States currently "imports" physicians equivalent to the production of 40 average medical schools.

Figures are not available as to the exact number of Rhode Islanders currently studying abroad. Informal estimates place it between 30 and 50. Attrition is probably high, since there is evidence to

show that only half of the American students who enter a foreign medical school actually do graduate with an M.D. degree. The period of study is long, typically five years beyond the American bachelor's degree. This does not include the year of "externship" or "hospital service" which schools in France, Italy, and Mexico now increasingly require either to improve the student's clinical preparation, or to obtain some social benefit from the investment they make in American students. Moreover, it seems reasonable to expect that the entry of foreign medical graduates into the mainstream of United States medicine will be made quite difficult by 1975 when accreditation criteria for house officer programs become more stringent. It is, therefore, appropriate that members of the medical profession consider these factors carefully when called upon by friends, patients, and acquaintances to offer opinions on the advisability of entering a foreign medical school. It may be in the best interest of some of these students to spend a year or two in some individually designed post-baccalaureate premedical program in a university in this country to justify another attempt to enter a United States medical school.

What can the Brown program in Medical Education do to alleviate this situation? In the immediate future, unfortunately, little more than give every possible consideration to qualified Rhode Islanders who apply for admission to Brown as college freshmen or as first year medical students. The joint AMA-AAMC Liaison Committee on Medical Education has recommended that the new Brown program refrain from admitting transfer students from foreign medical schools until it has graduated its first M.D. class, i.e., 1975. Our Liaison Committee

(Continued on next page)

with the Rhode Island Medical Society has expressed the view that inadequate clinical preparation in medical schools abroad presents the most serious obstacle to transfer in advanced standing. The AMA has suggested that American medical schools organize a year of supervised clinical training for foreign medical graduates. This leaves open the problem of financing (who should pay for such training?, the student? the hospital? the federal government?), as well as legal considerations (which institution will award which degree? what is the accreditation status of such programs? will state boards recognize their existence?).

The facts are unaltered that presently there are inadequate numbers of physicians being graduated from U.S. medical schools and, with the impressive number of U.S. residents seeking a medical education abroad, we can not simply hide our heads in the sand and hope that the problem will resolve itself painlessly. Those American students who "survive" the first three years of medical school abroad are likely to graduate and return to practice in the States. It is in the best interests of our community to provide them with appropriate training opportunities, and thus to enhance the quality of their future practice.

PIERRE M. GALLETTI, M.D., Ph.D.
Vice President (Biology and Medicine)

This column is intended as a channel for information in medical education that may affect the practicing professional community of Rhode Island and as a place to describe current and future plans for the Brown Program of Medical Education. The Editors.



SYMPOSIUM ON INSULIN

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OSCAR B. CROFFORD, M.D.—Chemical Effects of Insulin on Carbohydrates.

JOSEPH LARNER, M.D., Ph.D.—The Effects of Insulin on Glycogen Metabolism.

ROBERT BRADLEY, M.D.—Intergration of Insulin Action from the Human Cell to the Fully Active Man.

Book Reviews

MEDICINE IN A CHANGING SOCIETY by Lawrence Corey, Steven E. Saltman, and Michael F. Epstein. St. Louis, The C. V. Mosby Company, 1972. \$6.50.

This is another of the spate of books on the delivery of health and medical care which has flooded the book market in recent months. Its title would be appropriate for most of them. Its origin is unique and an interesting commentary on the national scene. In 1969 the second year class at the University of Michigan Medical School became disenchanted with the curriculum and more particularly with its inadequacy in meeting the needs of medical students who would be practicing in a society undergoing rapid change. Discussions between the students and faculty resulted in a series of exercises jointly sponsored by the medical school and the School of Public Health. This series of essays by 17 contributors is based on material presented in this course. The three editors at the time of publication (August 1972) were interns, two at the University of Michigan Medical Center and the other at The Massachusetts General Hospital. The panel of writers includes such old hands as Brian Abel-Smith of the London School of Economics, Bertram L. Brown, Wilbur J. Cohen, H. Jack Geiger, Melvin Glasser, Edward M. Kennedy, and the late Walter P. Reuther. The credentials of most of the academic contributors are highly respectable, while those with political axes to grind are adequate to their polemical orientation.

The text, while well written for the most part, covers ground which at this juncture has been well ploughed by many others. The chapter titles are familiar — such as "The Hospital and Society" and "Changing the Face of American Health". This reviewer found very few pearls or provocative ideas. The relentless progression of events has already dated some of the text. The 92nd Congress was still in session at the time of publication.

Some of the questions raised are constructive. How can the hospital more effectively contribute to a comprehensive medical care delivery system? How can we establish methods and criteria for the evaluation of office care? How can the gaps in Medicare be plugged? What can be done to overcome the uneven protection and uncertainty of Medicaid? How can the qualifications of practicing physicians and surgeons be assured? What is the

future of a Health Science Corps? What is the role of the physician's assistant?

Beyond these and a few other concerns, we find the same old saws and hackneyed phrases. Walter Reuther drags out his model T Ford. There are the tired arguments for prepaid group practice and a paean of praise for Kaiser-Permanente. Senator Edward M. Kennedy promotes his familiar views with this unfounded hyperbole: "Americans of virtually every political persuasion agree that the nation is now facing a crisis in health care." One author comes out strongly for the elimination of direct billing and non-assignment of claims under Medicare Part B.

Wilbur J. Cohen, the old pro, analyzes the current situation with considerable objectivity. He states: "It is clear that no one has yet devised a foolproof method to control the charges, costs, and incomes of hospitals, physicians, and other providers of health care. There is a general 'conventional wisdom', which holds that if physicians were to practice in groups, rather than as individuals, the quality of medical care would be im-

(Continued on next page)

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proved, more services would be available, and costs could be kept down." He is not at all sure that the problem is that simple. He concludes: "It is doubtful whether it is desirable or even possible for a unilateral decision, either of government or physicians, or hospitals, to resolve these vexing problems. That is one of the lessons learned from Medicare."

The most telling comment in the book is a quotation from the writings of Hannah Arendt, not one of the authors. Mrs. Arendt, with characteristic astringency, observes: "The disintegration process, which has become so manifest in recent years, the decay of many public services, of schools and police, of mail delivery and transportation, the death rate on the highways and the traffic problems in the cities — concern everything designed to serve mass society. Bigness is afflicted with vulnerability, and while no one can say with assurance where and when the breaking point has been reached, we can observe, almost to the point of measuring it, how strength and resiliency are insidiously destroyed, leaking as it were drop by drop from our institutions."

SEEBERT J. GOLDOWSKY, M.D.

* * *

EXERCISES IN DIAGNOSTIC RADIOLOGY.

Volume 3 — BONE, by Lucy Frank Squire, William M. Colaiace, and Natalie Strutynsky. Philadelphia, W. B. Saunders Company, 1972. \$4.95

The authors in this volume continue their x-ray teaching series of "Exercises In Diagnostic Radiology" following the pattern set in their similar previous volumes of exercises in chest and abdomen with this third volume relating to bone.

The book "Fundamental of Roentgenology" by Luck Frank Squire, one of the authors of these exercises, is used as an introduction to the material in this workbook.

The problem-answer format on page spreads is again used, and this helps keep the student interested in the material presented.

The volume is divided into four parts: *Part I* — A series of page spreads of problems with clinical data. These problems are answered, and comparable normals are shown; *Part II* — Shows multiple problems of one particular area; e.g. spine, to indicate the wide range of disease that can be found in one area; *Part III* — A didactic consideration of bone growth along with problems relating to bone growth; and *Part IV* — A series of unrelated problems which might be seen in ordinary daily practice.

The authors readily recognize and acknowledge that the volume does not intend to be "even an abbreviated survey of bone disease", "but the material has been chosen to indicate principles."

On the whole, this volume as well as the preceding volumes of exercises provide an interesting format for student participation in the teaching process.

MANUEL HORWITZ, M.D.

* * *

CONFESSIONS OF A GYNECOLOGIST by

Anonymous, M.D. Garden City, New York, Doubleday & Company, Inc. 1972. \$7.95

This is an account written with humor and frankness by an anonymous obstetrician and gynecologist. As a woman's doctor he has encountered many conditions, such as wanted and unwanted pregnancies, various marriage problems, and menopausal difficulties. He shows in actual instances how he handles these and other situations e.g. "a sexy patient" or a case of "husbanditis".

He emphasizes that each woman is a special individual and must be treated as such with understanding. There should be no feeling of embarrassment nor any blame inferred. Each person and each problem is different.

The author is a real admirer of women, feeling that they face reality in many situations better than men.

He takes note of new advances in monitoring the condition of mother and unborn child during labor, the present (but not perfect) methods of birth control in order to limit the population explosion.

In an interesting chapter near the end of the book he tells of his own experience in becoming a Woman's Doctor. It was not easy!

In closing he states that National Health Insurance will not solve lack of sanitation, the poor nutrition, or the crowded rat-infested housing in the slums. There are many things to be done before good health of all our people can be assured.

MERLE M. POTTER, M.D.

⚓ ⚓ ⚓

PHOTO CREDIT

Through an oversight credit was not given in the January, 1973 issue of this Journal for the four illustrations on page 19 in the paper titled, "Normal Pressure Hydrocephalus: A Five Year Experience at Rhode Island Hospital." Credit for these illustrations should have been given to the Department of Nuclear Medicine of St. Joseph's Hospital. We regret this oversight.

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House Of Delegates Of The Rhode Island Medical Society

Report Of The Meeting Of September 20, 1972

A regular meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Providence, on Wednesday, September 20, 1972. The meeting was called to order by the Speaker of the House, Dr. John Ham, at 8:06 p.m.

Members in attendance were: Drs. John C. Ham, Thomas F. Head, David Newhall, Carl V. Anderson, John C. Osenkowski, Charles S. Dotterer, Richard G. Bertini, David R. Hallmann, Philip J. Lappin, Thomas J. Martin, A. John Elliot, James A. McGrath, Leonard S. Staudinger, Robert V. Lewis, John A. Dillon, Edmund T. Hackman, Stephen J. Hoye, John P. Grady, William J. MacDonald, Bertram H. Buxton, Jr., Joseph E. Caruolo, George V. Coleman, Dominic L. Coppolino, Martin E. Felder, Martin Feldman, Constantine S. Georas, Frank Giunta, Herbert F. Hager, Milton W. Hamolsky, Abraham Horvitz, Henry M. Litchman, Vincent I. MacAndrew, Peter Mathieu, Jr., Raul Nodarse, Robert P. Sarni, Guy A. Settupane, Richard P. Sexton, William R. Thompson, Wilson F. Utter, Elihu S. Wing, Jr., Seebert J. Goldowsky, and Arnold Porter.

Also present were: Dr. Hugo Taussig, Chairman of the Mental Health Committee and Dr. Kenneth Liffmann, Chairman of the Medical Economics Committee, Mr. John E. Farrell, Executive Secretary, and Mr. Edward J. Lynch, Assistant Executive Secretary.

Members absent were: Drs. Robert E. Baute, William J. O'Rourke, Charles B. Round, Joseph E. Wittig, Frederick Peirce, Jr., Paul J. M. Healey, Joseph L. C. Ruisi, Erwin Siegmund, Francis L. Scarpaci, J. Gerald Lamoureux, John T. Barrett, Nathan Chaset, Joseph D. DiMase, Joseph L. Dowling, Jr., Herbert Ebner, Donald P. Fitzpatrick, David Freedman, Edward J. Gauthier, Alvin G. Gendreau, John B. Lawlor, Ralph F. Pike, James A. Reeves, George H. Taft, Armand D. Versaci, and Joseph E. Cannon.

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the March meeting of the House had been printed and distributed by the Secretary.

Action: A motion was made, seconded and voted that the minutes of the March 8, 1972 meeting of the House of Delegates be approved as presented.

REPORT OF THE SECRETARY

The Secretary read his report which was included in the handbook.

Action: A motion was made, seconded and voted that the report of the Secretary be approved and placed on record.

REPORT OF THE TREASURER

Dr. John P. Grady, Treasurer, noted that his report was included in the handbook for the meeting. He read parts of the report.

Action: A motion was made, seconded and voted that the report of the Treasurer be approved and placed on record.

RECOMMENDATIONS FROM THE COUNCIL

Dr. Stephen J. Hoye, Secretary, presented recommendations from the Council, and the following actions were taken:

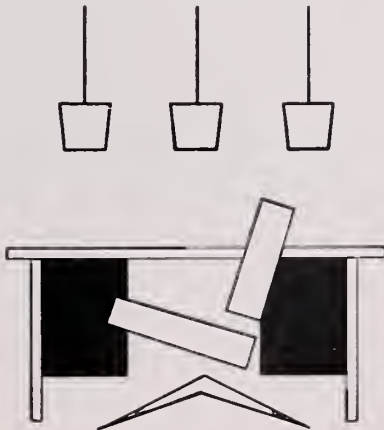
1. *Benevolence Fund Trustee*

The House elected Dr. David Freedman of
(Continued on next page)

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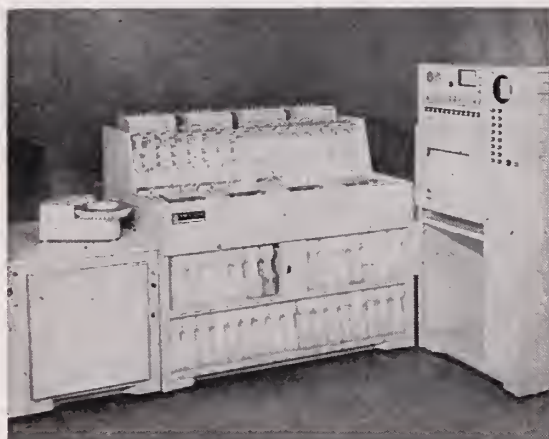
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Providence for a three-year term, until 1975 as a trustee of the Benevolence Fund.

2. Budget and Dues for 1973

The House approved the proposed budget for 1973, and voted that the annual dues for active members in practice more than a year be \$100 in 1973, and for members in the first year of practice, \$50.

3. AMA Delegate and Alternate Delegate

The House elected Dr. William J. MacDonald of Providence for a two-year term until 1975 as delegate to the American Medical Association and Dr. John J. Cunningham of Pawtucket for a two-year term until 1975 as an alternate delegate.

Dr. Robert V. Lewis, President of the Society, commended Dr. Edmund T. Hackman of Warwick, outgoing delegate, and Dr. Seebert J. Goldowsky of Providence, outgoing alternate delegate, for their excellent performance during their terms in office. The House accorded Doctors Hackman and Goldowsky a round of applause.

RESOLUTIONS

The Secretary presented two resolutions as submitted to the House in the handbook for the meeting, one from the President of the Society, Dr. Robert V. Lewis, and one offered by Dudley Associates, of Providence.

Action: A motion was made, seconded and voted that the House of Delegates approve of the resolution from Doctor Lewis supporting the position that the chiefs of services should clearly indicate on intern and/or resident contracts the right to, or not to engage in work anywhere as practicing physicians on his or her free time, as follows:

RESOLUTION ON INTERNS AND RESIDENTS EXTRA CURRICULAR ACTIVITIES

Whereas the Rhode Island Medical Society believes that intern and resident programs are primarily educational, and

Whereas any permissible extra curricular activity of an intern or resident should in no way interfere with his or her performance in the primary assignment, therefore

Be It Resolved that the hospital chiefs of services should clearly indicate on intern and/or resident contracts the right to, or not to, engage in work anywhere as practicing physicians on his or her free time.

Action: A motion was made seconded and voted that the House refer for further clarification to Dudley Associates its resolution that the

House endorse the concept of free standing ambulatory operating facilities under such regulations as proposed by the Council on Medical Service of the American Medical Association, and that it request the Department of Health to adopt regulations for ambulatory facilities in establishing applicable licensure requirements.

LONG RANGE PLANNING REPORT

Doctor Lewis noted that the report of the Long Range Planning Committee was included in the handbook. The House discussed various sections of the report.

Action: A motion was made, seconded and voted that the report of the Long Range Planning Committee be approved, and submitted to the membership at the annual meeting.

REPORT OF THE AMA DELEGATES

The Speaker pointed out that the report of the delegate and alternate delegate to the American Medical Association was included in the handbook.

Action: A motion was made, seconded and voted that the report of the delegates to the American Medical Association be approved.

COMMITTEE REPORTS

DELIVERY OF MEDICAL CARE COMMITTEE

Dr. Joseph E. Caruolo, Chairman of the Committee on the Delivery of Medical Care, outlined the work of his committee concerning a questionnaire which will be forwarded to each member of the Society seeking his views pertaining to the future delivery of medical care. He also reported on a recent sampling of 1 per cent of the state's population by SEARCH concerning the delivery of medical care, and on a recent proposal of Blue Shield presented to the committee concerning a prepaid capitation program within a Foundation concept.

MEDICAL ECONOMICS COMMITTEE

Dr. Kenneth A. Liffmann addressed the House concerning a recent meeting of his committee at which representatives of the St. Paul Fire & Marine (which insures approximately 50 per cent of the membership of the Society) reported that the company would seek a professional liability premium rate increase. Doctor Liffmann pointed out that the current Rhode Island rate is among the lowest in the country.

He also explained that the Blue Cross-Blue Shield premium for Society members would be increased for the next fiscal year, November 1, 1972-October 31, 1973 because of the high experience factor with the group plan. Doctor Liff-

(Continued on page 51)

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7:30 A.M. —Surgical Staff Conference

**12:00 Noon—WHITMARSH ORATION — *Bernard Fisher, M.D.*
“Biological Considerations in the Management of
Primary Breast Cancer.”**

2:00 P.M. —Surgical Staff Presentations

THURSDAY, MAY 10, 1973:

10:30 A.M. —Papers By Staff Surgeons

12:00 Noon—CLINICOPATHOLOGICAL CONFERENCE — *Bernard Fisher, M.D.*

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—George Sarton, from "The History of Medicine Versus the History of Art"

**Are combination drug
products useful in treatment
involving concomitant use
of two or more drugs?**

Opinion

**Results of a questionnaire to
7,000 physicians:**

62.9%

**Believe combination drug
products are useful.**

13.8%

**Do not believe combination drug
products are useful.**

Are combination drug products useful in treatment involving concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription — which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

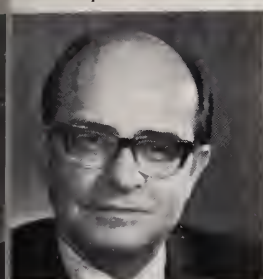
tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in for a number of years and that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I'm thinking particularly of penicillin-streptomycin combinations that patients — especially surgical patients — were given in injection. This made less discomfort for the patient, less demand on nurses' time, and fewer opportunities for dosage errors. To take such preparation off the market doesn't seem to me good medicine, unless actual age showed a great deal of harm from the injection (rather than the promise) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA may play a major role in making this determination. In fact, I don't think it should avoid taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence in making the ultimate decision.

Maker of Medicine

V. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are used effectively to treat a certain condition, and it is known that they are compatible, it clearly is useful and convenient to provide them in one dosage form. It would make no sense, in fact it would be pedantic, to insist they always be described separately. To avoid the appearance of dandyism, the "expert" decries the combination because it is a fixed dosage form. When the "expert" invokes the concept of fixed dosage form he obscures the fact that single-ingredient pharmaceutical preparations are also fixed dosage forms. By a singular semantic exercise he imparts a pejorative meaning to the term "fixed dose" only when he uses it with respect to combinations. What is ignored is the simple fact that only in the best of circumstances does any physician attempt to titrate an exact therapeutic response in his patient. It is quite possible that some aches and pains will respond to 500 mg. of aspirin yet that fact does not militate against the usefulness of a dose being 650 mg. The other semantic ploy often called into play is to describe a combination product as rational or irrational. Take antibiotic mixtures, the source of much of the criticism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

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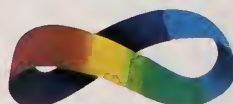
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Indications: For the treatment of susceptible infections; e.g., *E. coli*, *D. pneumoniae*. For full list of approved indications consult labeling.

Contraindications: Hypersensitivity to any tetracycline.

Warnings: The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has also been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug. **Pregnancy:** In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease

in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class.

Precautions: Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Because tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

Adverse Reaction: GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings.") When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

NOTE: Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN is not notably influenced by foods and dairy products.

*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.
†Case Report, Clinical Investigation Department, Lederle Laboratories.



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965 12-20 436-2

HOUSE OF DELEGATES REPORT

(Continued from page 49)

mann also indicated that the outstanding benefits derived from the Major Medical Plan were unique and only made available through the Society.

He also reported that the local Blue Plans executives feel that the AMA catastrophic coverage recently announced has many exclusions and that the coverage would not appear to be advantageous to the membership of the Society in view of the \$30,000 coverage under the major medical program here.

Action: A motion was made, seconded and voted that the report of the Medical Economics Committee chairman, as presented, be received.

MENTAL HEALTH COMMITTEE

Dr. Hugo Taussig pointed out that a resolution in the Mental Health Committee report asked that no insurance plan, public or private, not any health care and maintenance program be considered as providing "comprehensive health care" unless it include provisions for psychiatric services on the same level with all other medical services.

Action: A motion was made, seconded and voted that the resolution be approved along with the report of the Mental Health Committee.

PERINATAL MORTALITY

Dr. Bertram H. Buxton, Jr., chairman of the Perinatal Mortality Committee, reported on an extensive study carried on with the assistance of SEARCH for an Analysis on Infant Mortality in Rhode Island which has recently been published.

He also stated the committee will recommend a continuing medical education program regarding perinatal mortality, and the matter will be brought to the attention of the Boston University Medical School faculty with the request that doctors be taught how to prepare documents for medical, legal and research purposes.

Action: A motion was made, seconded and voted that the report as submitted be received, and approved.

OTHER COMMITTEE REPORTS

The Speaker noted that there were several reports submitted for the information of the House and calling for no special action by the House.

Action: A motion was made, seconded and voted that the reports of the Committees on Aging, Continuing Medical Education, Scientific Work and Annual Meeting, Nursing, Emergency Medical Services, Maternal Health, Social Welfare, Medical Aspect of Sports, Blood Bank,

publications, Occupational Health, Alcoholism, Peer Review, Allied Health Professions and Services, Public Laws, and Drug Abuse be received and placed on record.

NEW BUSINESS

Doctor Litchman submitted a motion to the House that no resolution submitted to the House be considered unless the sponsor of the resolution, or his representative, is present.

Action: A motion was made, seconded and voted that the sponsor or his representative must be in attendance at a House of Delegates session in order for the resolution to be considered.

APPRECIATION OF OPHTHALMOLOGISTS

Dr. Charles Dotterer delegate from Newport, expressed for the Rhode Island Ophthalmological Society its appreciation for the support, both moral and financial, to the ophthalmologists in their court case relative to the use of drugs by optometrists.

ADJOURNMENT

The meeting was adjourned at 10:13 p.m.

Respectfully submitted:

STEPHEN J. HOYE, M.D.

Secretary

(Continued on next page)

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REMARKS BY THE PRESIDENT OF THE R. I.
MEDICAL SOCIETY TO THE BLUE SHIELD BOARD
OF DIRECTORS, SEPTEMBER 18, 1972

The letter addressed to members of the Blue Shield Board of Directors from Mr. Arthur F. Hanley on September 6, 1972 entitled "Blue Shield Guidelines Proposed by Mr. Denenberg" deserves comment; especially since the material was again emphasized on page 4 of the Board Bulletins for September 12, 1972 by an editorial summary, using a single quote, "We are convinced that the single most essential reform to be made in Pennsylvania regarding health care delivery is to make Blue Shield truly consumer oriented". Mr. Denenberg again received publicity in Board Bulletins May 18, 1972 on page 3 by the quotation, "he also called for greater consumer control of Blue Shield", and further in the same issue in what can hardly be called objective reporting the following item on page 3 "DOCTORS WILL STILL PRESCRIBE FOR PENNSYLVANIA BLUE SHIELD".

Last year at exactly this same time at Newport the editorial theme was the composition of the Board of Directors of R. I. Blue Shield. Not in Mr. Hanley's letter of September 6, or in the Board Bulletin of May 18, or September 12, or in any Board Bulletin is mention made of the reaction of the Pennsylvania Blue Shield Board of

Directors in rejecting Mr. Denenberg's concept, nor anywhere the slightest publicity given to the reaction of the medical society of the state of Pennsylvania which is similar to our own. The Pennsylvania County Medical Society for example has called for an impartial judge to conduct the hearings. The President, R. Robert Tyson, said, "We agree that public hearings should be held on rate increases requested by Blue Shield. These hearings, however, could not be held on an impartial basis by a person who has already made up his own mind, and who by his own admission has decided what should be done before the evidence has even been presented".

Mr. Denenberg has an idee fixe, and an obsessive-compulsive desire to change the membership of the board of directors and has refused any action cooperation, or rational judgment until his whim has been satisfied. Dr. Masland, President of the Pennsylvania Medical Society, said, "If Blue Shield can be improved it should be, and physicians will support any equitable improvements. If it is possible to become even more efficient in serving what patients and providers of care require in insurance plans, such efficiency should take place. But we would hope that the good of an organization is something upon which to build, and something not to discard. If the insurance commissioner has an axe to grind with physicians, let him grind away so long as he does not trample the best interests of the public as he pursues his personal vendetta". Consumers should be and are on Blue Shield boards because it is the public that Blue Shield serves, but physicians and others involved in the delivery of health care are another segment of the public crucial to the plan. "Medical care delivery requires public acceptance and cooperation of those who deliver it. One cannot survive without the other. There is a working mix on the Blue Shield board, and we want it to continue to work."

The Board Bulletins do not include the ludicrous remarks of Mr. Denenberg — but really not any more ludicrous than many of his other utterances — that if Mr. Denenberg "got sick, he would go outside of the country for medical care". It is incredible how far obsessive-compulsive ideas will warp judgment. Dr. Masland responded to this irrational outburst on Mr. Denenberg's part "In his intemperate cries for attention the insurance commissioner may be serving his own needs, but certainly not the best interests of the people of Pennsylvania, for the physicians of the

(Continued on Page 75)

RHODE ISLAND MEDICAL JOURNAL

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that Treats Your Patient's
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Needs:

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ROBITUSSIN [®]	●					●
ROBITUSSIN A-C [®]	●	●	●			
ROBITUSSIN-DM [®]	●	●		●		●
ROBITUSSIN-PE [®]	●				●	●
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Cardiac Catherization

Author Presents A Short History Of Its Development As A Major Diagnostic Procedure

By Stephen M. Jones

In 1870 Adolf Fick described a method of calculating cardiac output by measuring oxygen or carbon dioxide content in the arterial and mixed venous blood. These measurements were combined with either total oxygen intake or total carbon dioxide elimination by the lungs per unit time. Claude Bernard had realized this principle earlier (1844-1845) but had pursued the idea no further. Fick attempted to gather data suitable for his theories, but had encountered a problem obtaining mixed venous blood. By simply drawing blood from the veins of the arms or legs there was no assurance that the sample was truly mixed. For sixty years nothing could be done about this problem. No one could find any method of obtaining a proper venous sample.

THE EARLY YEARS

In 1929 Werner Forssmann⁵ published the results of a study using catheters. Forssmann noted that during cases of poisoning, heart collapse, or narcotic overdose there may be need for rapid effect of medication, and in some cases intercardiac injection might be necessary. However, puncturing of the heart wall is hazardous and can lead to cardiac tamponade or to fibrillation, sometimes fatal. For these reasons direct intercardiac injection was considered a last resort.

STEPHEN M. JONES, *Student, Brown University, Providence.*

Forssmann did his experiments on dogs and cadavers, catherizing them for the purpose of developing a technique of dye injection. He passed a catheter through the veins of a cadaver, and then he opened up the body to see where the catheter had gone. The next step was to pass a catheter within his own veins. He had a colleague expose his arm vein, and then he inserted a number four ureteral catheter. At 35 centimeters his colleague begged him to stop for fear of the consequence. Though Forssmann "felt perfectly fine", he removed the catheter. A week later he repeated the experiment on himself without help. The catheter passed all the way to his right auricle, a distance of 65 centimeters. He verified its position by the use of x-ray fluoroscopy and a mirror. Forssmann described the experiment as causing him little pain. Rather, there was a slight sensation of heat throughout the body, and at one point he had a sensation causing him to cough. Other than a slight infection at the entry site in his arm there were no after-effects.

One major concern was that a foreign object in the body would cause injury. During World War I metal objects had been left within bodies for over a month with no visible effects. Also, Völk-mann had left a puncture needle within a vein for fifteen minutes without deleterious effect. Forssmann attempted his procedure on other human

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subjects. His first case was that of a man with gastritis and a ruptured appendix. His circulation was impaired, he had cyanotic mottling of his extremities, his pulse was weak, and his breathing was shallow. After central catheterization glucose, water, and strophanthin were injected. This strengthened his pulse and respirations, although the patient died of his infection. Although Forssmann had done his work for the purpose of injecting materials into the heart, he recognized the potential of using catheters for circulatory studies.

As long ago as 1844 Claude Bernard and Francois Magendie had passed long thermometers into the heart in the same general manner as that later used by Forssmann. They were seeking to settle a debate on heart temperatures. Lavoisier had concluded years before that combustion was taking place in the lungs where the blood came into contact with the inhaled oxygen, and was the source of body heat. Becquerel and Breschet seemed to confirm this by demonstrating that the blood leaving the heart was one degree higher in temperature than the blood entering the heart. Magendie and Bernard, questioning these results, passed thermometers directly into the heart and found that blood in the right ventricle was in fact slightly warmer than that in the left ventricle. This provided conclusively that blood *going to* the lungs has a slightly higher temperature than blood *leaving* the lungs. Therefore, the lungs could not be the source of body heat.

In the year following Forssmann's publication Otto Klein of Germany reported eleven successful placements of a catheter into the right side of the heart in eighteen attempts. In three of these cases Klein was able to establish for the first time an arteriovenous oxygen differential. This work had been going on in Prague simultaneously with Forssmann's without his knowledge. Klein traveled to the United States and attempted to convince a group in Boston that his technique was useful for gathering blood samples from different areas of the heart. However, he was met with skepticism as to its value. Had they listened, the practice of cardiac catheterization might have become common usage ten years earlier than was actually the case. He then headed South and attempted to set up his own laboratory.

It was not until 1941-42, some twelve years later, that André Cournand and Dickinson W. Richards of Bellevue Hospital in New York City began to publish their material on heart catheteri-

zation that led to so much work in the following years. During the nineteen-thirties catheters were used for injecting dyes into various parts of the circulatory system, including the great vessels. Pulmonary arteriograph had first been performed by Professor Lopode Carvalho and Doctor Antonio E. Moynz of Portugal in 1931. Efforts at making their techniques feasible and practical were, for the most part, in vain during the early nineteen-thirties. Carvalho and Moniz injected radiopaque sodium iodide directly into the heart through a catheter.

THE BEGINNINGS OF ANGIOGRAPHY

In 1938, however, Robb and Steinberg injected an organic iodine compound known as 3,5-di-iodopyridon acetic acid diethanolamine (iodopyracet) or Diodrast®, a reddish substance used in 70 per cent aqueous solution. They injected the dye peripherally to enable it to pass through the heart and lungs in a normal circulatory pattern. This also allowed them time to activate equipment after the injection before it reached the heart. Until 1938 there had been no method of visualization of the heart chambers that worked well. The technique of Robb and Steinberg gave very good results, visualizing the superior vena cava and the aorta. The chambers of the heart and the ventricular wall were also clearly visible. The injection itself had to be completed within a two second time period. Three to five seconds later the filling of the right auricle, right ventricle, and pulmonary artery branches could be seen. Anywhere from six to sixteen seconds later the left chambers were visualized. This technique was used for many years following the exact specifications of Robb and Steinberg.

The basic idea is still in common use, because of the use of indwelling arterial needles and catheters the only pain to the patient is a sensation of intense heat shortly after the dye is injected. This technique was better than direct cardiac injection for two reasons. Short catheters allowed the Diodrast® to travel a distance before it reached the heart. Also, once the catheter was in the artery or vein there was no further discomfort other than the temporary feeling of warmth. Direct injection into the vein would cause pain which would irritate the patient causing his circulatory pattern to change and increasing the chance of harm.

COURNAND'S WORK

André Cournand, a medical graduate of the University of Paris, came to the United States in

1920 as a young doctor. In the mid-1930's he was introduced to Dickinson W. Richards, who at that time was working at Bellevue Hospital in New York City. Seeking to investigate the problem of shock, they requested space at Bellevue for a study of emergency room patients suffering from that condition. Cournand and Richardson planned to build their work upon the foundation of Cannon's monograph on shock published in 1923 and based on data from research done during the First World War. Space was granted and the project got underway. It was known that during shock the basal metabolism is depressed and a state of acidosis exists. The amount of oxygen in the venous blood is also diminished. While these facts had been known, the most important finding from Cannon's wartime studies was that shock following an injury was regularly associated with a marked loss of circulating blood volume. Cannon and others had actually measured this difference, thus disproving the theory, popular at the time, of vasomotor exhaustion. The vascular bed during shock is in a state of vasoconstriction rather than vasodilation, as it would have to be to support the exhaustion theory. Cournand and Richards established a basic technique for catheterizing the right heart in human subjects to measure blood volume and pressure. This technique was developed in 1940-41 and was described in these words:

"These measurements (pressure and volume) were achieved by means of a long ureteral catheter introduced into a median basilic vein and thence passed along axillary and subclavian veins into the right auricle".⁴ The danger most feared was thrombosis or embolism. For eight years Cournand and Ranges had experimented with animals. Their one attempt in man up to that time had been unsuccessful. Finally in 1941 the technique was perfected, and many hundreds of cases were done in man with no complications.

It was concluded that the oxygen content of auricular blood sampled in this manner was a true representation of mixed venous blood if the tip of the catheter was placed close to the tricuspid valve. Also, subsequent samples differed by no more than 0.5 per cent. While the carbon dioxide readings were not always as consistent, the oxygen readings were more than adequate for proper evaluation.

A sample case done in 1940 by Cournand and Ranges yielded these data:

Patient: Age 61; Weight 53 kg; Height 180 cm
Body Surface Area 1.66 square meters
Carcinoma of the Stomach
12/31/40

ventilation 7.77 lit min, dry gas 0°C, 760 mm Hg.
CO₂ output 2.47%—192 cc/min
O₂ intake 2.89%—225 cc/min

R.Q. .854
CO₂ content vols %: Mixed Venous Blood 54.7
Arterial Blood 51.2

A.-V. difference 3.5
O₂ content vols %: Mixed Venous Blood 10.0
Arterial Blood 14.0
A.-V. difference 4.0

R. Q. from blood samples CO₂ A-V diff. = .875
O₂ A-V diff.

Cardiac Output: liters/minute 192
CO₂ A-V difference = 3.5 = 5.49
O₂ A-V difference = 225
4.0 = 5.63

Cardiac Index 3.35 lit/sq meter of Body Surface Area
Heart Rate per minute = 70 Stroke Volume = 79.5 cc

The Fick principle depends upon measurement of carbon dioxide or oxygen in arterial blood and in mixed venous blood. Also oxygen intake or carbon dioxide output are measure for a predetermined time period. The formulae used are:

1. Cardiac Output (ml, per min.) =
O₂ intake (ml/min) X 100
Arterial O₂ (vol %—Venous Dx (vol %)
2. Cardiac Output (ml per min =
CO₂ intake (ml/min) X 100
Venous CO₂ (vol %) — Arterial CO₂ (vol %)

Oxygen blood content has been shown to yield more reliable cardiac output determinations than does carbon dioxide. It has also been found that one to two minutes for a gas expiration bag sample is too short a time to assure a reliable sample. A longer time period is recommended where feasible without irritating the patient. It is essential that all blood samples from different portions of the heart as well as the gas expiration sample be taken at the same time.

From these studies Cournand and Richards found that patients suffering from post-injury shock have a blood flow of less than two-thirds the normal flow. In measuring this flow, as well as the pressures in the heart and vessels, Cournand and Richards used Fick's derivation. Thus seventy years after Adolf Fick derived his equations for cardiac output, they were finally put to practical use. Cournand studied hundreds of cases using this technique with virtually no difficulty.

(Continued on next page)

BLOOD VOLUME DETERMINATION

Among their reports the basic findings are that the "pressure of blood in the right auricle of a normal anaesthetized mammal, lying supine, varies around a mean value of slightly less than zero or atmosphere."²⁸ They further stated that "pressure in the great veins shows a gradual increase as one passes peripherally". With the successful development of this technique cardiac catheterization for the purpose of determining cardiac output took a giant step forward. The next logical step seemed to be to question the Fick principle and devise a new method of determination. Henderson and Haggard described a method of measurement of ethyl iodide in the blood following injection. Samples were taken at different locations and at different times. In their method the patient was required to breathe through a mouthpiece which tended to irritate the patient and affect the results. Starr and associates³¹ used a modified method which did not improve results. The low readings for ethyl iodide in returning blood could not be explained. Starr then turned to a new device for measuring the heartbeat, the ballistocardiograph, as a means of determining cardiac output. Very sensitive instruments recorded the movement of the body on a balanced table reflecting the heart beat; from these data cardiac output could be calculated. It was accepted by some as a feasible alternative to Fick's principle and catheterization, since Fick's method required true mixed venous blood and up to that time no way of obtaining it had been devised.

In the words of Cournand, however: "The student of this method (ballistocardiograph) is faced first with the problem of recording these forces unaltered. He is confronted then with a choice among the physical entities related to movement of the blood, i.e., variations in the mass and acceleration, secondary vibrations, instantaneous flow intensity, etc., and with the most difficult problem of working out a general formula relating the recorded forces and the chosen physical entities, a problem of Analytical Dynamics requiring a profound knowledge of this branch of higher mathematics. The last difficulty is finally to derive a practical formula for the calculation of cardiac output, a formula which may be applicable to all possible variations of the stroke volume in health and disease."³⁴ On the other hand, he felt that "differences among proponents of the second method (Fick) are of a less serious nature, dealing

chiefly with minor considerations concerning techniques."

Cournand still leaned heavily toward the Fick principle and catheterization. In 1942 Cournand, Ranges, and Riley⁹ compared the results of ballistography and a direct Fick method for measuring cardiac output in man. The ballistocardiograph gave readings that were 14.4 per cent smaller than simultaneous ethyl iodide readings done on normal subjects. Standard basal conditions were not obtained in using the ballistocardiograph; and, possibly, that is one reason why the results were so poor.

Cournand and co-workers wrote: "The determination of cardiac output by the direct Fick method, although difficult, is based on fundamental physiological principles and has checks within itself". Accuracy by this method is very high. As long as all procedures are done carefully, the results are reasonably reliable. The ballistocardiographic method relies upon an estimation of the internal cross-section of the aorta. Tables relating age, body surface area, and size of the aorta were compiled from autopsy results. A small error in this estimation results in appreciable error. Results of this comparison study by Cournand et al. showed that "cardiac output as determined by the direct Fick method was found to be larger by 18.5 per cent than the value calculated from the ballistocardiogram, using Bazett's tables* for the internal cross-section of the aorta."

VENOUS CATHETERIZATION

In 1947 Dexter¹¹⁻¹³ published a series of papers on studies he had been carrying out on patients with congenital heart disease. Cournand's method of catheterization had been used with slight modifications to adapt it to possible altered results due to a diseased heart. Whereas, in a normal heart blood samples from the pulmonary artery are "true mixed venous blood", it was found that in congenital heart patients it was often impossible to obtain mixed blood if the tip of the catheter was placed near a shunt. Application of the Fick prin-

*Bazett and co-workers³ reported studies on the circulation rate in 1935. They cite the work of Suter who did autopsies and compiled data on body surface area, and the diameter of the aorta (among other measurements). For five to eight years these data were used as a primary source for estimating size of the aorta and from this the stroke volume. Bazett believed that Suter had not taken into account distention of peripheral arteries and veins, as well as of the aorta, and that the results could be unreliable to some extent.

ciple to data from congenital heart patients hence is no more than an approximation.

Dexter and associates studied venous catheterization as a possible diagnostic aid. They found that this technique was a highly successful tool in congenital heart disease patients as long as the physician kept in mind the allowances that must be made due to the effect of shunts or some other malfunctioning on blood flow and oxygen content. Dexter then measured pressures in the chambers of the heart and in the pulmonary artery. He found great differences in the pressure waves in the right auricle and right ventricle. Knowledge of the pressures in the different chambers is very important in determining pulmonary stenosis.

The last of Dexter's monographs was on the use of venous catheterization for investigating a number of heart and circulatory diseases. With the use of catheters Dexter measured a shunt of approximately 7.6 liters per minute in a man with patent ductus arteriosus. In passing a catheter into the right ventricle Dexter found that the catheter moved into the aortic arch and then into the descending aorta, a sign of septal defect. The observations led to a diagnosis of Tetralogy of Fallot, the basic lesion of which is pulmonary stenosis. Venous catheterization permitted Dexter and others to diagnose heart defects much more readily. All the answers, however, are not provided by this technique. The shunt must be large enough to produce a noticeable oxygen difference, and the placement of the catheter must be under fluoroscopic control. Venous catheterization, a large step forward, certainly not the last word, was the significant contribution of the nineteen-forties.

ACCESS TO THE LEFT VENTRICLE

In the early fifties the need for a method of catheterizing the left side of the heart became evident. There was no direct way to diagnose diseases in that area. Outward signs above were quite inadequate. Other than visualization by thorascotomy, an impractical approach, methods of catheterization of the left side of the heart were sought. Left arterial catheterization was first performed by transbronchial left atrial puncture by J. Facquet and others in 1952. One year later Olov Björk⁵ devised a method of transthoracic left atrial puncture, which was later modified to permit insertion of a plastic catheter. This allowed Björk to gain access to the left ventricle and the aorta. A right thorascotomy was then performed, following which puncture was made opposite the left atrium at the seventh or eighth intercostal

space. The thorascotomy was at that time necessary for safety purposes. Björk inserted the needle 10-14 centimeters into the atrium with continual checking by fluoroscopy. At times the catheter passed through the azygos vein, which caused a negligible hematoma. The catheter even at times passed through the esophagus into the left heart.

In 1959 this technique was modified to a transeptal puncture which used a 70 cm long plastic sheathed needle passed through the saphenous vein into the right atrium. The needle was aimed posteromedially and pushed quickly so that it punctured the interatrial septum and entered the left atrium. This technique permitted two studies at one time, although it required ligation of the saphenous vein.

As of 1960, there were three primary methods of catheterizing the left ventricle. The first, which is also the most frequently used, requires passage of the catheter used in the septum puncture down through the mitral valve. This will work satisfactorily if the tip of the catheter is curved into a loop. A second, more dangerous, method is that of direct puncture of the left ventricle. This requires a more perfect placement of the needle, but ultimately gives less information. The last method, retrograde catheterization, involves passage of a catheter along the femoral or branchial artery and then into the aorta.

GENERAL CONSIDERATIONS

From all of this work a few simple rules emerge. The most important requirement is to cause as little pain as possible. Following injection of a local anaesthetic at the puncture site there should be no further pain. If care is taken, no pain will be caused by passage of the catheter. It is well for someone to sit at the patient's head to comfort him and calm his nervousness. Pain and fear bring an increased pulse, a change in breathing, and obviously error in the results.

The placement of the catheter tip is also important. The tip must be placed in such a location that it is actually drawing mixed venous blood. The optimum position has been found to be one or two centimeters above the diaphragm, with the tip pointed medially.

Exhalation collections are an integral part of the calculation of cardiac output. A measurement of one or two minutes is not considered adequate, although, with a sick patient or one in shock a period too much longer causes irritation. Many laboratories use a three minute collection time

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and find it satisfactory. Also, in using Fick's equations measurements of oxygen content are usually much more reliable than those of carbon dioxide content. Normal ranges have been determined after many hundreds of catheterizations. In individual cases the age and health of the subjects will alter the results from this norm. A proper diet and exercise increase the quality of the results just as chronic nervousness and tension affect them adversely.

SUMMARY

Catheterization developed as a method of temperature measurement and progressed to a level of high sophistication. The experiments of Forssmann, Klein, and Cournand were basic, but computers programmed to utilize Fick's equations now perform the computations. In hospitals all over the world hundreds of catheterizations are now performed daily.

Research continues in many centers around the world, including the catheterization laboratory in Columbia's College of Physicians and Surgeons, where Cournand and Richards did much of their early work. In conversations with André Cournand* I found that he is still pursuing improvements in technique; but more importantly continues his efforts to spread the knowledge and use of these techniques to more and more areas.

Direct heart injections can now be achieved within five seconds after the vein is entered, and no longer does the chest have to be opened to observe the heart.

What was considered a chancy operation even in the early forties — only thirty years ago — is now a routine procedure in many cardiology departments. It is a technique that can save lives where there was often no hope before. Claude Bernard's beginning has come a long way. Where will it go from here?

REFERENCES

¹Allison PR, Linden RJ: The bronchoscopic measurement of left auricular pressure. *Circulation* 7:669-73, May 53
²Baldwin EdeF, et al.: The demonstration of ventricular septal defect by means of right heart catheterization. *Am Heart J* 32:152-62, Aug 46
³Bazett HC, et al.: Calculation of cardiac output and effective peripheral resistance from blood pressure measurements with appendix on size of aorta in man. *Am J Physiol* 113:312-34, Oct 35

*The author writes: "We talked for three hours, and I heard the story of all the men and events leading up to his work with Dickinson W. Richards. His knowledge of the subject of catheterizations was vast."

⁴Bing RJ: Catheterization of the heart. *Adv Intern Med* 5:59-141, 1952
⁵Bjork VO, Malmstrom G, Uggla LG: Left auricular pressure measurements in man. *Ann Surg* 138: 718-25, Nov 53
⁶Cournand A, Ranges HA: Catheterization of right auricle in man. *Proc Soc Exper Biol Med* 46:462-6, Mar 41
⁷Cournand A: Measurement of cardiac output in man using right heart catheterization: description of technique, discussion of validity and of place in study of circulation. *Fed Proc* 4:207-12, June 45
⁸Cournand A, et al.: Recording of right heart pressures in man. *Proc Soc Exper Biol Med* 55:34-36, Jan 44
⁹Cournand A, Ranges HA, Riley RL: Comparison of results of the normal ballistocardiogram and a direct Fick method in measuring the cardiac output in man. *J Clin Invest* 21:287-94, May 42
¹⁰Cournand A, et al.: Measurement of cardiac output in man using the technique of catheterization of the right auricle or ventricle. *J Clin Invest* 24: 106-16, Jan 45
¹¹Dexter L, et al.: Studies of congenital heart disease. I. Technique of venous catheterization as a diagnostic procedure. *J Clin Invest* 26:547-53, May 47
¹²Ibid. II. The pressure and oxygen content of blood in the right auricle, right ventricle, and pulmonary artery in control patients, with observations on the oxygen saturation and source of pulmonary "capillary" blood. *J Clin Invest* 26:554-50, May 47
¹³Ibid. III. Venous catheterization as a diagnostic aid in patent ductus arteriosus, tetralogy of Fallot, ventricular septal defect, and auricular septal defect. *J Clin Invest* 26:561-76, May 47
¹⁴Fisher DL: The use of pressure recordings obtained at transthoracic left heart catheterization in the diagnosis of valvular heart disease. *J Thorac Surg* 30:379-96, Oct 55
¹⁵Forssmann W: Die Sondierung des rechten Herzens. *Klin Wochenschr* 8:2085-7, 5 Nov 29; addendum 8:2287, 3 Dec 29
¹⁶Gasul BM, Arcilla RA, Lev M: *Heart Disease in Children*. Philadelphia, J. B. Lippincott Company, 1966, P. 168
¹⁷Hansen AT: Pressure measurement in human organism. *Acta Physiol Scand* (supp. 68) 19:1-230, 1949
¹⁸Holling HE, Zak GA: Cardiac catheterization in the diagnosis of congenital heart disease. *Br Heart J* 12:153-82, 1950
¹⁹Howarth S, McMichael J, Sharpey-Schafer EP: Cardiac catheterization in cases of patent interauricular septum, primary pulmonary hypertension, Fallot's tetralogy, and pulmonary stenosis. *Br Heart J* 9:292-303, 1947
²⁰Klein O: Zur Bestimmung des zirkulatorischen Minutenvolumens beim Menschen nach dem Fickschen Prinzip. *Munchen med Wchnschr* 77:1311-2, 1 Aug 30
²¹Korv RC, et al.: *Primer of Cardiac Catheterization*. Springfield, Illinois, Charles C Thomas, 1965
²²Massee JC: Atrial septal defect. Correlation of autopsy findings with data obtained by right heart catheterization. *Am J Med Sci* 214:248-51, Sept 47
²³McMichael J, Sharpey-Schafer EP: Cardiac output in man by direct Fick method; effects of posture, venous pressure change, atropine, and adrenaline. *Br Heart J* 6:33-40, Jan 44
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Consultation In Child Psychiatry

The Roles Of Consultants In Child Psychiatry Are Defined And Illustrated

By The Committee on Child Psychiatry of Childhood and Adolescence

I. INTRODUCTION

Child psychiatry, or at least child psychiatrists, have perhaps entered to a less than expectable degree into the mainstream of medical and health practice in the State of Rhode Island. Yet through a variety of child psychiatric services, child psychiatry has been present in Rhode Island since 1925, and child psychiatrists are, in fact, involved in consultant roles in many settings. It is the purpose of this paper to inform the general medical community with regard to this work.

For the year 1971-72 the project assumed by the Committee on Psychiatry of Childhood and Adolescence of the Rhode Island District Branch, American Psychiatric Association, was an exploration of the role of child psychiatrist as consultant. To carry out this project the Committee recruited nine active child psychiatrists in the community to serve as resource persons in discussion groups centering on the subject of consul-

tation. From these discussion groups the Committee has distilled a number of observations. It feels that the final product may also be useful and interesting to anyone involved in administration and consultation, general medical, as well as mental health.

In such settings as child guidance clinics the team approach to diagnosis and treatment in child development problems became established. In this process child psychiatrists experienced all the administrative and integration problems which arise when people of differing backgrounds, training, experience, and disciplines must be brought together to work for common goals. This experience serves the child psychiatrist in his consultant role.

Example

Valerie, a 12 year old white girl, was referred to a child guidance clinic in November by her school because she was shy, withdrawn, and relatively noncommunicative. In the course of the diagnostic study, it appeared that the girl had been improving before the referral was made. There were some communication problems in the family, but actually in view of the family history the parents, especially her stepmother, were doing a remarkably fine job. From the point of view of potential psychopathology the girl should have been autistic. Psychologic studies showed a fairly healthy maturing girl.

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CONSULTATION IN CHILD PSYCHIATRY

A conference was requested with key school personnel. Only two out of seven showed up despite what we felt was adequate communication by us to them. It appeared that a special active state program had been begun the previous September in the school system with an un-integrated, heterogeneous group of part-time professionals from a variety of backgrounds professionally, ethnically, and socially and of varying ages. The school itself was in a section of the state where urban people of one ethnic background were "invading" a stronghold of de-social workers were feeling great frustration in was requested so that all could be present. (The child psychiatrist, by this request, was serving as an unofficial, not contracted-for consultant.) At the second meeting all seven appeared.

It was learned that there had been little or no preparation for the "invasion" of the school by the "modernizers" in September. Finally, it was learned that the team was pressured "from above" to get going and produce results and prove its worth. There had been much non-verbalized tension and a lack of communication that by February (the time of our meetings with them) was just beginning to be resolved. The new group in its "do good now" had bypassed the semi-integrated, entrenched, incumbent group in order to deal directly with parents and children. (Ideas change faster than people.)

By referring Valerie with her symptom of lack of communication the school had unwittingly and inadvertently highlighted its own internal problem. Valerie's "improvement" coincided almost *pari passu* with the improvement in the school's internal communication. They had set up weekly conferences of the old and new on a regular weekly basis. This was learned in the second meeting of the clinic's diagnostic team with the seven members of the school personnel.

II.

General and specific ideas and situations were discussed according to the background and experience of the resource psychiatrists. A central question returned to consistently was "What makes for a good consultant?" A good consultant (in the eyes of the consultants) is one who, aware of his identity and role, is generally supportive, does not take sides, and is not jockeyed into taking sides if sidetaking pressures are present, as they often are. Some anger was expressed at institutions and "the establishment" in its various forms, and much sym-

pathy for those designated as scapegoats by the establishment. For example, some consultants felt that on occasion attempts are made to use them as judges whose judgments will give sanction to getting rid of "offensive" people.

Example

The psychiatrist is asked to evaluate and make recommendations to commit an elderly patient to a nursing home since she has no relatives and is unable physically to manage by herself which she had been able to do until her admission for a fractured pelvis which now does not require further hospitalization.

The patient is described as belligerent, disturbed, aggressive and "illogical". She is not informed of the psychiatrist's visit "because it would further upset her" so that when the psychiatrist identifies himself, she responds with immediate anger.

When this initial problem is overcome, it becomes clear that this woman has always been extremely self-sufficient and "proud" and that she has become irate because of the lack of information about her condition and the urgent need for appropriate care which she obviously cannot provide for herself and that she is just not going to be "cast out", forgotten, or "sent to a dying hole". She is not psychotic and, therefore, requires no psychiatric commitment as such. She is informed of this, which seems to be met with considerable relief, but she is confronted with the necessity for voluntary admission to a nursing facility. The note written into the record describes the situation as mentioned and closes with the comment that "if the patient refuses to voluntarily go to the nursing home, it is suggested that a commitment *for medical reasons* should be done. It is felt that the dignity of the patient would, thus, be better served without adding the burden of a psychiatric diagnosis".

III.

Consultation must be differentiated from supervision and therapy. Therapy is a patient-therapist relationship openly contracted for. The patient seeks out the therapist for help for himself. Although historically consultation in the mental health field involved a therapeutic relationship with the consultee, the consensus was that consultation is not therapy.

Supervision, contrasted with therapy, is hierarchical. Someone with greater skill, training, or

both oversees someone with lesser skill. The supervisee is treating, in direct relationship, a third person. It is understood that the supervisor will not do therapy with the one being supervised. This is a different kind of contract from that of the patient-therapist. This supervisor helps the therapist understand the process of therapy (resistances and transferences), and to avoid countertransferences which may interfere with that process. He also helps the therapist retain his own identity during the stresses of the therapeutic process. Again, although historically consultation has at times been identified with supervision, the consensus was that consultation is not supervision. The following exemplifies supervision, though it entails coordination of more than the work of one supervisee:

Example

An adolescent girl and her mother were being seen separately by two social work therapists. The father had died several years prior to their seeking help. Since then mother and daughter had become embroiled in a hostile competition regarding a young man, in which mother was forbidding daughter contact, seemingly unaware of the jealousy that she herself was feeling. Both social workers were feeling great frustration in dealing with the actions of their clients. The supervisor's role was to allow them to ventilate this, thus enabling them to work constructively with the patients. The need to grieve father's death was pointed out, and it was suggested that mother, daughter, and both social workers have joint conferences from time to time where mother-daughter interaction could be focussed on. It has been important for the supervisor to be sympathetic to the therapists' frustration and recognize the limits of what can be achieved as well as to point out that they are helping to stabilize a very difficult situation.

Finally, consultation is the use of a specialist in his restricted field of knowledge and experience by an agency, institution, or individual which has responsibility for a broader and deeper area of living than that of the specialist. Among such areas of living are education, occupation, hospitalization, child rearing, and community interactions.

IV.

In attempting to define the functions of a consultant (in child psychiatry) one runs into some confusion. In a general hospital the general psychiatric consultant would interview the referred patient and write a note about the session. Finally,

he would list suggestions about handling, perhaps request psychological or additional laboratory studies, and as indicated recommend other consultants, e.g. neurologist. The child psychiatrist's job as consultant in a general hospital adds a further, and often more important component, i.e., the bringing together and integrating of the various professionals concerned for present handling and long-range planning of continued care to the child (and family).

Example

The child psychiatrist consultant is asked by the pediatrician (as it turns out because of insistent requests of the nursing staff) to evaluate the situation of a child who had been in the hospital for a number of weeks and who is dying.

The interview with the child brings forth the presence of strong denial mechanisms together with frequent demands of the staff which, if not met, result in expressions of anger or tears. It is frequently noted in the record that the parents are "difficult to deal with", and inconsistent in their visiting as well as critical of the staff. The nurses on the various shifts appear to be functioning in a rather ambivalent way toward this child and his parents, a source of considerable distress to them since "it does not happen with any other patients".

The child psychiatrist consultant brings together the personnel from all three shifts who are involved with the child. The function of the child psychiatrist consultant in this instance is to attempt to bring to the awareness of the staff the anguish they are experiencing in relationship to the hopelessness of the case and their helplessness. They must recognize that since their primary commitment is toward the relief of pain and the preservation of life, that a feeling of futility and failure is operating and interfering with the appropriate handling of the case.

V.

The first step in consultation is the setting up of a contract. Clues to some of the contract problems may be gained from the first contact: How was the initial request made, when, by whom, how, and why you (the particular child psychiatrist) have been approached. Given that the consultant has the time and interest to become involved, he sets up an appointment so that a dialogue of exploration in becoming acquainted begins. Who wants what from whom, for whom, at what fee, and what frequency? In the goulash of expecta-

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tions, the consultant is alert consistently to indicate and clarify the *areas that are none of his business*. (His ability thus to say "no" without feeling anxious, helps the others nonverbally to accept their limitations with less anxiety.) At about this point the consultant begins to feel whether or not a trusting teamwork relationship can be set up.

In one or more discussions aimed at defining the contract, roles, and identities, expectations and limitations are spelled out as concretely as possible, hopefully to mutual satisfaction. Sooner or later, without enhancing resistances, the consultant states *what he will be*. Tact indicates that this be done without overt confrontation, that is, without a take-it-or-leave-it attitude that might polarize the relationship.

The consultant may find that the agency is not able or ready to use him, or that certain parts are not ready. He may find it advisable to suggest some preliminary help, i.e., didactic lectures, training groups, or seminars, in order to work toward the later use of consultation. A consultant may also find that he's not the right person for the agency and may therefore say so.

If a nonmedical agency (school, family agency) is accustomed to the usual hospital-type of consultation (patient is seen by the psychiatrist, findings and recommendations are presented to the agency), the result may be an inefficient and insufficient use of the consultant.

It might be clearer to call him a "Resource Psychiatrist for Emergency Situations" for disposition problems and definite psychiatric problems which are referred for brief evaluation or continuing care. (Some members of the committee said that in their experience so-called emergencies reflect more the anxiety of the caretaker than the anxiety of the client.) In such an emergency the consultant and administrator and staff might have to meet a number of times to clearly define the needs and expectations of the agency and correlate them with the consultant's function in the agency.

Example

In a family agency where psychiatric consultation had been provided by means of direct interviewing of patients, it required considerable effort and patience on the part of a new consultant to change that firmly established image to a more far-reaching approach.

The time which was limited to two hours per week was eventually utilized for "case presentations and discussions" of situations which were

problematic to the agency or the individual counselor. Other times, it centered on topics of interest to the homemaker, such as the chronically ill patient or the dying patient in reference to the reactions of the homemakers and staff. General topics were discussed before or after specific cases were presented, sometimes related to the case and sometimes unrelated. The total experience was one of learning, broadening of views, some self-awareness, and a freer interchange among the staff.

It is hoped that in the course of the dialogue mutual respect and liking — as is fitting among peers — occur despite differences. Thus, even if no contract is established and there is a disengagement of the contracting parties, there will not be residual hard feelings and the future use of the same or another consultant is not blocked.

VI.

The consultant should be prepared for "functional deafness" in others: The requesting agency is feeling anxious in the face of some crisis that it feels unable to handle, needs help for, and thinks it should be able to handle without outside help. There may be undue resentment at needing psychiatric help. The presence of the consultant may relieve the anxiety of the others who may then be able to hear him. He may need to relieve anxiety continuously or at intervals thereafter.

If a consultant comes into a rigidly organized institution and can get to be liked and trusted, this may result in his eventually being able to play more literally the role of a consultant, or at least prepare the way for his successor to play the appropriate role.

Example

In a local college, there is increased student concern with the problem of drug use and abuse in the campus. The students decide to set up a Drug Information Center. A 24-hour a day telephone service is installed. The students realize fairly soon that they are not only getting calls about drugs, but also about personal crises. A consultation with the psychiatrist brings to the attention of the students that the counselling and information service they provide, requires professional supervision if they are to be effective, particularly in the area of "crisis intervention". A plan is worked out whereby the psychiatrist "listens to the listeners" and sessions are scheduled from time to time with the student involved.

The results are as follows:

- a). Although the students are initially quite pleased with the service they render in their "crisis intervention center", they eventually realize their limitations and re-orient their services more towards referral to available community services.
- b). As the drug problem in campus wanes and the students are better informed, eventually the Drug Information Center closes.
- c). The students then become seriously involved in regular discussion with the administration and other resource persons in the campus. Committees are set up to look into the overall counselling services: i.e., Academic, Social, Vocational, Health, Religion, and others. With the very active participation of the psychiatric consultant, a more effective and useful communication among all the counselling services develops.

The consultant must not be so enthusiastic about the potential in his being used that he fails to be sensitive to the agency's fears of change, its power structure, its way of doing things, and its perception of the psychiatrist as judge and moralist, as expert in insanity, and as encourager of unlimited permissiveness. The thought which may underlie resentment for the consultant's having been "dragged in" may be the self-condemning "Why didn't I think of that".

VII.

The role of the consultant (no matter how the contract is set up) may in practice be restricted by the power structure of the institution, the inflexibility, or both, of individuals at various levels (resistance to change, misperception of threat). To accomplish something, he may wind up giving emotional support to those in direct contact with the client and with whom some rapport is possible. For example, in certain settings disciplinary figures may not be approachable, but counsellors and the like may respond favorably to support.

Example

At a local Family Planning Agency, there is increased concern with teen-age pregnancies. The Medical Advisory Board in conjunction with the Executive Board appoint the psychiatric consultant to look into the problem and the possibilities for some adequate service.

The psychiatric consultant suggests: "Teen-age pregnancies are not prevented by contraception alone . . . but by education as well". A

teenage center is established where regularly scheduled meetings are held. At these meetings the teenagers are given a series of films and lectures on sexuality accompanied by "rap sessions" conducted by a trained social worker who meets regularly with the psychiatrist.

The teenage program is successful. Attendance to the rap sessions increases and it is the feeling of the people involved and others, that a good service is being provided to the teenagers in the community.

VIII.

The setting cannot be changed directly by the consultant; it has to change itself if changes are to last. The consultant, as a catalyst, may facilitate change. But he does not take an active part and avoids telling others what to do, since this is demeaning and implies that the other is ignorant and not to be trusted. The consultant must also avoid playing the hot-shot interpreter (miracle-worker rescue complex). He should not be overwhelming. He should use any focus on behavior as a means of directing attention toward an understanding of emotions and motivations, without letting this be confused with excusing, defending or justifying.

IX.

The following is a list of points brought up by the resource psychiatrists, reformulated as questions, and applicable to most consultative situations:

1. Out of what motivational components did the decision to ask for a consultant arise?
2. What are the primary functions of the agency requesting consultation?
3. Who are the individuals involved?
4. What is their relationship to each other?
 - a. What nonverbal contracts, understanding, rules and regulations govern their relationships?
 - b. Who is paying whom and what power lies in this?
5. What sources of anxiety are there above the presenting question or complaint?
6. What is their understanding and attitude about psychiatry in general and psychiatrists in particular? And about child psychiatry and child psychiatrists? How much fear and anger? Fear of mind reading, of awareness of or exposure of personal foibles? Anger at needing outside help? Anger and fear lest critical judgments be made?

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Short Bowel Syndrome

Characteristic Findings May Result From Extensive Surgical Removal Of Bowel, Exclusion Procedures, Or Enteropathy

By John R. Stuart, M.D.

The small bowel syndrome comprises the signs and symptoms, deficiencies, and complications which develop in a patient functionally deprived of a large portion of the small bowel. This may be the result of a single or multiple resections, surgical exclusion, or severe enteropathy. The early literature relating to this syndrome consisted mainly of case reports of small bowel resections usually done for trauma, vascular accidents, or volvulus. Some of these patients had also undergone a partial colectomy or gastrectomy.

EXTENSIVE BOWEL RESECTION

The first report is that of Koeberle who in 1881 described the resection of 205 cm of small bowel from a 22 year old female¹. In 1888 Senn used the term extensive to denote removal of 200 cm or more of the small bowel². This represented approximately one third of the small bowel and was thought to be the maximum resection compatible with safety.

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Since the literature of the early 1900's there has been ample evidence that resection of 50 to 60 per cent is compatible with normal existence³. Resections approaching 75 per cent will have good results in the majority of cases. Terms such as massive, extensive, or radical have been used to describe small bowel resections. There is variation in the extent of resection indicated by these terms; *actual measurement is essential*. Dreesman in 1899 stated that it was more important to measure the intestine remaining rather than that excised⁴. It is now customary to measure both segments. The length of the portion remaining is usually measured by means of an umbilical tape along the anti-mesenteric border. The resected specimen is usually measured by the pathologist. Since the small bowel is an elastic organ, its measurement is not easy. If it is necrotic, it may be very difficult to measure. The remaining intestine, which has a natural tonus and peristalsis, also presents difficulties.

Authorities have varied opinions as to the length of the small bowel (Fig. 1)⁵. The duodenum, as the name implies, is 12 finger breadths in length, or 25 cm. The jejunum and ileum, although obviously different in appearance at their extremities, subtly merge with each other. The jejunum is usually considered to be the first two fifths of the small bowel, whereas the ileum is the distal three fifths.

Small Intestine	
Morris	700 cm
Bockus	610 cm
Gray	698 cm
Haymond	657 cm
(1,100 adults—21½ ft)	
Duodenum—25 cm—excluded	

Figure 1

The specific segment of small bowel resected is also important, as diverse areas serve different functions. Jensenius in 1945⁶ and Kremen in 1954⁷ found that in the dog sacrifice of the proximal bowel was much better tolerated than sacrifice of the distal bowel. Since then, more definitive functions of the three portions of the small bowel have been documented (Fig. 2). As with the anatomy of the small bowel, function and absorption are grossly different at the respective ends, while some functions merge in the mid-portion.

Small bowel bypass or exclusion is now part of the surgical armamentarium for either weight or cholesterol reduction. The short bowel syndrome may occur in these patients.

VASCULAR OCCLUSION

When a mesenteric vascular accident is suspected, early operation is very important. It will reduce the postoperative mortality and increase the possibility of finding a viable segment of small bowel. All necrotic bowel must be resected. If the bowel is of questionable viability, arterial fluorescein injection with ultraviolet illumination may delineate bowel with good, poor, or no circulation.

A portion of the mesenteric small bowel is necessary for survival. Patients with duodenocolostomy fare poorly, the average survival being 10 months³. The length of mesenteric small bowel necessary for survival is difficult to ascertain. Between 20 and 45 cm will probably permit survival with a fair to poor result⁸. If resection of bowel with questionable viability is likely to result in very little or no mesenteric small bowel remaining, consideration may be given to preserving this bowel with a view to re-exploring in 24 hours. However, jeopardy of the patient's life is usually not warranted simply to avoid potential nutritional problems.

REGIONAL ENTERITIS

In regional enteritis conservation of bowel is also a key principle. Initial resections should have margins of about 10 cms. Surgery for recurrence should be more conservative. If mesenteric nodes are removed, care must be taken to avoid injury to

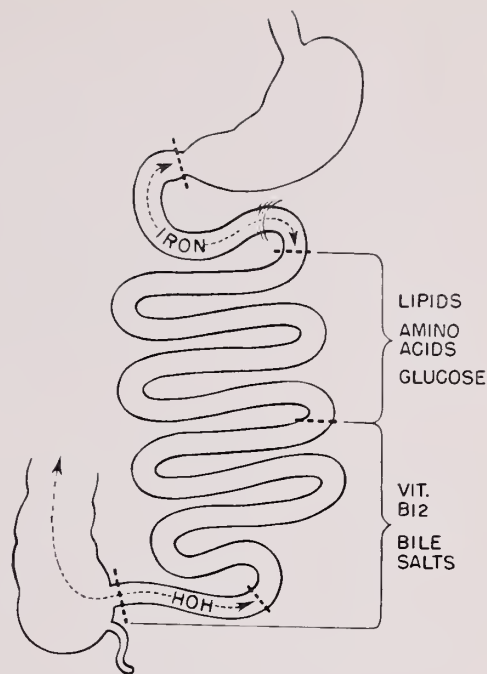


Figure 2. Absorption of various substances in diverse areas of the bowel. (From Colcock, BP, and Braasch JW: *Surgery of the Small Intestine in the Adult*. Philadelphia, W. B. Saunders Co., 1968, p. 24.)

mesenteric vessels. The question of resection versus retention of "skip areas" is best resolved on a very conservative basis. The primary treatment of regional enteritis should be medical with a view to avoiding massive resections, if possible. Patients in fact compensate more effectively for staged resections than for single resections of equal magnitude. The worst thing that can happen to these patients is not two or three operations.

Patients with extensive small bowel resection develop gastric hypersecretion⁹. If surgery is required for peptic ulcer disease, a gastroduodenostomy is preferable to a gastrojejunostomy in order that no duodenal absorption will be lost.

CLINICAL FINDINGS

The clinical picture of a patient with small bowel resection will vary according to the extent of the resection, condition of the remaining intestine, associated surgery such as partial colectomy or gastrectomy, age, and general physical and mental health of the patient.

At one extreme of this clinical spectrum is a patient described by Kinney in 1962⁸. This patient, a 21 year old male, required a duodenocolostomy

(Continued on next page)

for midgut volvulus. His clinical course during a 13 month follow up period is described in the report. Three fat-free meals per day and hourly tube feedings of 100 ml each were required. As a calculated risk parenteral codeine, the only agent which decreased his diarrhea, was given. The patient was taught to insert his own feeding tube and inject his codeine. Five hundred ml of whole blood were required every two months. Mineral, vitamin, and trace element supplements were necessary.

At the other extreme would be a patient with a significant resection manifesting no nutritional deficiencies and little diarrhea or steatorrhea.

PATHOGENESIS

A rapid transit time and lack of absorptive surface have long been accepted as reasons for diarrhea and steatorrhea in these patients. In the past decade bile salt deficiency has been shown to be another mechanism responsible for these symptoms. Bile salts are synthesized in the liver from cholesterol, conjugated with certain amino acids, and passed into the duodenum where, due to their detergent properties, they form micellular solutions. Bile acids activate pancreatic lipase, and the products of liposis are also placed into micelles suitable for absorption. Thus dietary fats are digested, dissolved, and subsequently absorbed.

The proximal small bowel is the major site of lipid digestion and absorption. Bile salts then pass along the small bowel and are themselves absorbed by an active transport system in the ileum. So efficient is this process that less than five per cent of the bile salts escape reabsorption to be lost in the feces. The absorbed bile salts then return to the liver and are again secreted to complete the enterohepatic circulation. Usually two such cycles of the bile pool occur per meal.

Ileal reabsorption and recirculation, rather than hepatic synthesis, is the major factor in maintaining the bile salt pool in man. Patients with diseased or absent lower small bowel will fail to reabsorb sufficient bile salts¹⁰. This interruption of the enterohepatic cycle will result in the following events:

1) Initially increased hepatic synthesis of bile salts will compensate for this fecal loss. In this manner loss of 20-30 per cent of the bile pool will be restored. Losses in excess of this cannot be compensated for, as hepatic synthesis—normally small—is quite limited^{11, 12}; bile salt deficiency with insufficient intraluminal micelle formation and steatorrhea will result. Partially digested fats, fatty acids, and soaps will irritate the colonic mucosa and cause diarrhea¹³.

2) More bile salts will reach the large bowel. Bacterial action here will form secondary bile acids, some of which will block colonic water and electrolyte absorption, while others will produce secretion of water and electrolytes. The large bowel can absorb about 3L of fluid per day. Its mucosa, however, secretes 8L into the lumen. Therefore, a total of 11L must be absorbed for a net transfer of 3L. Failure of fluid and electrolyte transport in the colon due to bacterially transformed bile salts will result in diarrhea^{13, 14, 15}.

A paradox is present. There are less bile salts in the small bowel where they are needed and more in the large bowel where they cause problems. The cathartic properties of bile salts have long been known. They have also been used to treat ileus¹⁶.

A decreased bile acid pool will predispose to cholelithiasis in some patients and ethnic groups. The Indians of the southwestern United States have been found to have a markedly decreased bile acid pool in association with lithogenic bile^{17, 18}. Dissolution of gallstones in patients has occurred when a primary bile acid was given by mouth. This expanded the bile acid pool, increased its solubility potential, and slowly dissolved *in situ* calculi¹⁹.

Thus far, cholelithiasis in patients with extensive small bowel resection has not been found. Perhaps the low or no fat diet given to these patients is an effective deterrent.

The ileocecal valve complex of the terminal ileum and the cecum have been termed the "water-wringers" of the body. Surgical loss of these structures will aggravate diarrhea by an increase in stool water and a decrease in transit time.

After significant small bowel resection stools are persistently acid. Hydrochloric acid is not completely neutralized or absorbed¹³. Acid stools, fatty acids, plus fatty soaps and bile salts with their detergent actions will cause marked irritation of the anorectal and perianal skin. Retention of these irritative products in the rectal crypts will predispose to fistula formation especially in patients with regional ileitis. Treatment of rectal complications may be very taxing to surgical judgment. A diverting colostomy may be necessary in addition to rectal surgery for complete healing.

COMPENSATING MECHANISMS

Loss of a significant part of the small bowel will set in motion compensatory mechanisms. A metabolic plateau will be reached where nitrogen balance will usually be positive even though pro-

tein absorption is marginal. The lean body mass will balance the absorbing potential of the remaining small bowel. The patient may lessen physical activity to conserve calories. Diarrhea, usually very distressing initially, will improve as the absorptive capacity of the remaining small bowel increases.

In man, the small bowel is thrown into folds in all but the terminal ileum by the valves of Kerkring or the plicae circulares. These valves plus the intestinal villi are devices for increasing the absorptive surface of the small bowel. Microvilli which form the brush border of the columnar absorbing cell further increase the absorptive area.

Dilatation of the remaining bowel occurs as a compensatory mechanism. A small amount of dilatation will result in a large increase in the small bowel surface available for absorption as area is proportional to radius squared.

Flint, working with dogs in 1912, stated that hypertrophy of the villi and crypts occurring after extensive intestinal resections amounted in some cases to another 400 per cent increase in the absorptive area²⁰. Hypertrophy, when defined as the overgrowth of an organ or part due to increase in the size of its constituent cells, has not been shown to occur in man. In animals with over 50 per cent small bowel resection an increase in the length of the villi has been documented; and in man epithelial hyperplasia, an increase in the number of epithelial cells per unit length of the villus, has been documented²¹. There is no substantiation in the literature for the concept that new absorptive capacity is caused by intestinalization of the colon—that is, the formation of small bowel villi in the colon.

Another compensatory mechanism may be the cellular migration rate. Mucosal cells formed in the crypts migrate up the villi and are extruded into the lumen. In man this process usually takes five to six days. Extrusion of cells may provide intracellular enzymes to aid in intraluminal digestion. An increased rate of migration and extrusion has been found in rats with a partial small bowel resection, but thus far not in man²².

Normal growth and development may occur in infants and children who have experienced significant small bowel resection. In these cases normal growth of the small bowel will in itself increase the absorptive capacity. The small bowel increases in length by 30 per cent during the first year and doubles in the second. Medical care of these patients consists of attention to diet and ad-

ministration of various medications. An individual program for each patient should be worked out.

MANAGEMENT

A meticulously monitored diet is essential. A family member may be instructed in the preparation and planning of a diet. This may be necessary for successful treatment. It is equally important that the patient desires to be well. Psychological adjustment may be difficult in the patient who undergoes multiple operations, such as for regional ileitis. Good patient rapport, a cooperative family and patient, and a competent dietician are all essential.

Intravenous hyperalimentation, the development of which has been a major event in recent medical history, may be lifesaving in the immediate post-operative period. The ability to maintain positive nitrogen balance without oral intake is very important, as some patients will have voluminous diarrhea although only a small amount of food has been ingested. The elemental space diet may be instituted as the initial oral intake.

Low fat is the major feature of the usual diet, and small frequent feedings may be necessary. Medium chain triglycerides may be substituted for dietary fat, as breakdown products of long chain fats are not well tolerated. Medium chain triglycerides are predominantly C-8 and C-10 fatty acids. These are transported by the portal system rather than the thoracic duct and are readily absorbed even with diminished bile acids or pancreatic secretions²³. Medium chain triglycerides cost \$24-\$25 per gallon. A gallon will usually last three to four weeks, a cost of approximately \$1.00 per day.

Antiperistaltic agents, usually atropine derivatives, are very commonly used. Prolonged use of codeine or paregoric is not wise, as addiction will result. It is not unusual for a patient to spend \$15-\$20 per week for medication, a cost of \$2 plus per day.

If the patient's ileum is absent or diseased, vitamin B-12 is a necessity²⁴. Fat soluble vitamins A, D, K, and E must be supplemented, and also trace elements such as magnesium. Calcium carbonate, which will form insoluble soaps with fatty acids and also prolong the intestinal transit time, may be prescribed to alleviate steatorrhea. One gram of calcium carbonate can precipitate over six grams of fatty acids¹³.

Patients with small bowel resection have a resultant gastric hypersecretion. This in itself will

(Continued on next page)

cause diarrhea and decrease the transit time³⁵. If the stool pH is acid, an antacid, preferably one containing calcium carbonate, may be indicated.

Diarrhea of colonic origin, known as cholegenic diarrhea, may respond to cholestyramine. This is a basic anion exchange resin which acts by binding the bile acids in the bowel lumen to form a complex that is neither digested or absorbed. In doses of 12 grams per day it promotes stool excretion of the bile acid complex and lowers serum cholesterol. It has been used as a treatment for pruritis associated with cholestasis^{26, 27}. The cost of this medication is 50 cents per day. The patient ingests a four gram package immediately prior to meals. Higher doses will cause steatorrhea by reduction of the bile acid pool. Patients with steatorrhea of over 20 grams per day usually will not respond to cholestyramine treatment.

The oral intake of bile salts, although improving micelle formation and fat absorption, will considerably aggravate the patient's diarrhea. The use of cholestyramine, and antacids containing calcium carbonate, will significantly reduce chemical trauma to the anorectal area and perineal skin.

Adjunctive surgical procedures are available to decrease intestinal transit time, but preferably should not be done at the time of the original surgery. They may be considered after the patient has been observed and studied in the postoperative period.

REVERSED SEGMENTS

In 1962 the first successful case of a reversed intestinal segment with massive small bowel resection was reported in an 84 year old white female who required extensive small bowel resection for mesenteric thrombosis²⁸. Twenty-nine centimeters of viable jejunum remained. The distal 7.5 cm were reversed and anastomosed between the proximal jejunum and distal transverse colon. Three years later the patient was active and vigorous. Her preoperative weight of 125 lb had fallen to 90 lb. She was able to discontinue her dietary discipline.

The length of the reversed segment is a critical factor. If it is too short the transit time will not be significantly increased, while if it is too long fatal intestinal obstruction will develop. Reversed segments may allow bacterial contamination and overgrowth of the proximal bowel resulting in reduced absorptive capacity. The degree of bacterial colonization correlates well with absorptive deficits²⁹.

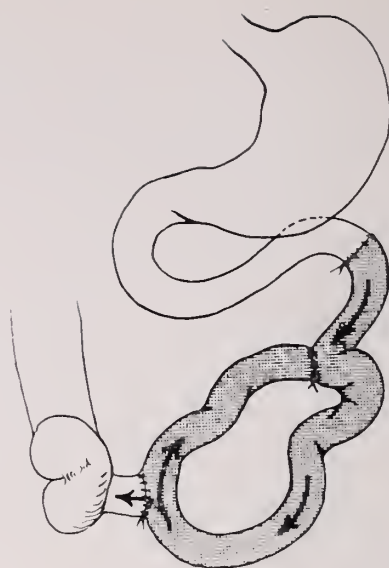


Figure 3. Eighty-five per cent resection of small bowel with circular anastomosis of ileum and ileocecal anastomosis.

In the dog the recommended length is from 3 to 7.5 cm; segments of 12.5 cm or over will produce obstruction. Jejunal segments may not be over 5 cm in length³⁰. Precise measurement of small bowel segments is difficult. In a study in which dogs were fluoroscoped four years after undergoing a reversed segment, peristalsis was normal in one segment, with no hesitation encountered. This raises a question as to the ability of a reversed segment to maintain its function over a prolonged period of time³¹.

OTHER SURGICAL PROCEDURES

In 1963 the first circle anastomosis or recirculating loop procedure was performed (Fig. 3) on a patient with 21 cm of viable small intestine. The patient did well over a three year follow-up period. Mackby et al. of San Francisco, who reported this case, state that prolonged survival in dogs with this procedure is possible with only 37 cm of small intestine remaining³². Reversed intestinal segments have been used distal to a recirculating loop anastomosis.

Vagotomy and pyloroplasty may also be considered. A vagotomy will usually decrease intestinal transit time, although in a small minority of cases paradoxical diarrhea may occur. This procedure may also be indicated for the gastric hypersecretion that occurs after significant small bowel resection.

Preservation of the ileocecal valve is preferable. Its loss, as noted, will result in decreased transit time, diarrhea, and bacterial colonization of the

small bowel. Isidore Cohn believes that there is a specific antibacterial product in the ileum which controls the small bowel flora. The ileocecal valve acts as a barrier to its loss. A case of a newborn infant²⁹ is recorded in which massive resection resulted in the loss of all but 5 cm of small bowel. A portion of colon was reversed but improvement did not occur. Bacterial colonization of the stomach was found to be present and was treated with antibiotics, following which the infant progressed satisfactory.

Studies in germ-free animals have revealed that intestinal transit time is increased to two to three times that in animals with normal bacterial flora while fecal bile acid loss is much less^{33, 34}. The cellular migration and extrusion rate is twice as long, and each villous cell remains in a mature state for a longer period of time³³.

Artificial sphincters or ileocecal valve substitutes may be created by muscle resection techniques^{29, 35}. Transit time will be increased, absorption enhanced, and protection against bacterial colonization of the small bowel achieved. By resecting the longitudinal muscle (Fig. 4) which opens the lumen and shortens segmental length, the action of the circular muscle, which is to narrow or close the lumen, will be unopposed³⁵.

Small bowel exclusion has been mentioned. The most recent variant of the Payne procedure for weight reduction entails anastomosis of the distal bypassed small intestine into the large bowel³⁶. Venting the bypassed bowel in this manner eliminates uncontrolled reflux of calorie containing chyme into the bypassed segment. It also allows free egress of colonic bacteria into the bypassed small bowel—in effect a long blind loop. To ascertain whether these patients will develop symptoms of bacterial colonization in the bypassed bowel will require a period of observation.

TRANSPLANTATION

An obvious answer to the short bowel syndrome is transplantation of small bowel³⁷. Availability of this technique, however, must await further advances in immunology. It will eventually be available. Lillihei in 1967 reported two cases of transplantation. The first, in whom transplantation of the small intestine alone was carried out, died 12 hours after surgery. The second, in whom pancreaticoduodenal transplantation was performed, survived for six months. Thus far seven cases have been reported. One or two meters of a small bowel allotransplant will probably suffice³⁸.

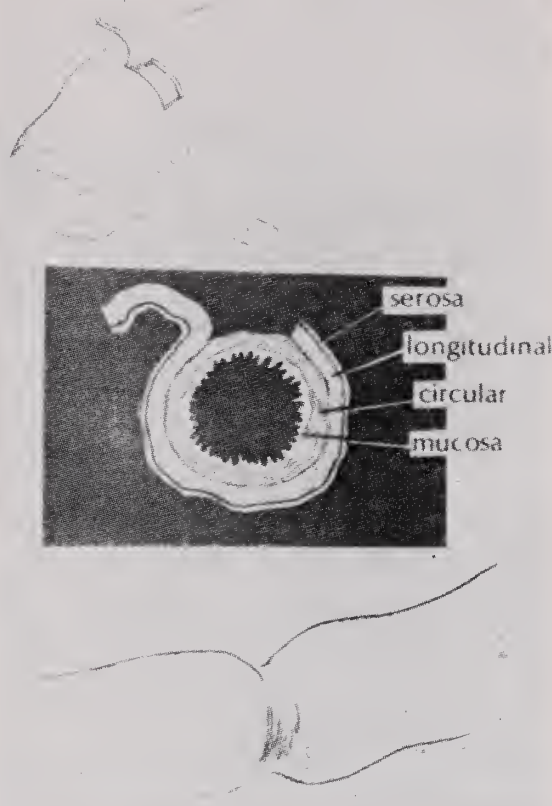


Figure 4. Technique of removing longitudinal muscle, leaving the underlying circular layer intact.

It would be remiss not to mention a medicine that is pleasant to take, not too expensive, and of considerable caloric value, namely ethyl alcohol. It is completely absorbed even in the absence of a major portion of the intestinal tract. It may be prescribed not only for caloric value but also as a morale booster.

REFERENCES

- ¹Koeberle E: Resection de deux metres d'intestin grele suivie de guerison. *Bull Acad Med* 8:249, 1881
- ²Senn N: An experimental contribution to intestinal surgery with special reference to the treatment of intestinal obstruction. *Ann Surg* 7:1-21, Jan 88
- ³Jordan PH, Jr, et al.: Radical small-bowel resection; report of two cases. *Am J Dig Dis* 3:823-43, Nov 58
- ⁴Dreesmann: Ueber grossere Darmresektionen. *Berl Klin Wehnschr* 36:337-9, 1899
- ⁵Haymond HE: Massive resection of the small intestine. An analysis of 257 collected cases. *Surg Gynecol Obstet* 61:693-705, Nov 1935
- ⁶Jensenius HC: Results of Experimental Resections of the Small Intestine of Dogs; Experimental Enteroprival Sprue. Aarhus, Universitets—forlaget, 1945
- ⁷Kremen AJ, Linner JH, Nelson CH: An experiment (Concluded on page 85)

The Significance Of Strict Products Liability Doctrine To The Physician

Shift Of Responsibility Encourages Making Of Safer Products And Protects The Consumer

By Thomas W. Pearlman, Esq.

November 1, 1971 the Rhode Island Supreme Court unanimously adopted the Doctrine of Strict Liability in Tort in *Ritter vs Narragansett Electric Company* and *American Motors Corporation*, 283 Atlantic 2d, 255. Speaking through Chief Justice Thomas Roberts, the Court stated:

"After long consideration this Court has concluded that the Doctrine of Strict Liability in Tort should become a part of the law of this state."

In its reasoning, the Court follows Chief Justice Traynor of the Supreme Court of California. In *Greenman vs. Yuba Power Products, Inc.*, 59 Cal 2d 57, 377P2d 897, the landmark case in the Doctrine of Strict Liability Chief Justice Traynor wrote:

The purpose of such liability is to insure that the costs of injuries resulting from defective products are borne by the manufacturers that put such products on the market, rather than by the injured persons who are powerless to protect themselves.

THOMAS W. PEARLMAN, practicing Providence attorney. Graduated from Classical High School, Amherst College, and Harvard Law School.

The costs of injuries are indeed high. For 1970 the National Commission on Product Safety estimated the costs of accidents involving household products at \$5.5 billion. The National Safety Council said the costs of work-related accidents was \$8 billion and the cost of automobile accidents as estimated by the Insurance Information Institute was \$16.2 billion. These statistics encompass 105,000 deaths and 390,000 injuries from which permanent disabilities resulted, but these statistics do not include economic loss due to death or compensation for pain and suffering. Millions of infants, aged, and others suffer soft tissue injuries and other symptoms of trauma from unsafe products. Many such injuries are unreported. Most experts estimate the victims far to exceed losses due to automobile accidents. Unfortunately many injuries to innocent children are from unsafe toys and other products likely to harm the young.

These statistics certainly illustrate the need for greater consumer protection. The decision in *Ritter vs Narragansett Electric Company* and *American Motors Corporation* now gives the Rhode Island consumer added protection. The facts of the case cited in the opinion were as follows:

Brenda . . . attempted to look into a pot atop

the range, in which water was boiling, in order to ascertain what they would have for their supper. She testified that she had opened the oven door, which was a drop-type door, and that when it came to rest, she put her foot on the edge of the door with the intention of standing on it to look into the pot. As she put her weight upon the door, the range toppled over, trapping both Brenda and her sister, Norma, beneath it. At the same time, the pot of boiling water scalded the two children.

The range in question had been purchased from the Narragansett Electric Company, which had purchased it from American Motors, Kelvinator Appliance Division.

In essence strict liability means that the consumer no longer has to prove that the manufacturer was negligent in the manufacture or design of a product. Instead, the consumer now has to show that his injury was due to a defective product. A defective product is one which is unreasonably dangerous to the user, not safe for its intended/expected use, and no warning has been given of its dangerous propensities.

Under this case strict liability applies to the retailer and distributor. The Court said "The real issue raised . . . was whether Narragansett had been negligent by reason of a failure to have inspected or tested the range prior to sale to determine whether it was dangerous. The accepted rule of law . . . is that one selling a chattel manufactured by another has an obligation to exercise reasonable care to inform the purchaser of the existence of a defect that would render the chattel dangerous in its intended use when the seller . . . knows or has reason to know that the chattel is, or is likely to be, dangerous when used . . ."

The *Ritter* case places a greater responsibility on the manufacturers and merchants who sell the product. In theory, it is hoped that this decision, along with others where the doctrine of Strict Liability has been applied, will make it less profitable for industry to subject the public to dangerous products. With the consumer gaining more rights, it should be a deterrence to industry to place defective or harmful products into the market which would subject the manufacturer or seller to expensive law suits.

ROLE OF THE PHYSICIAN AND HOSPITAL

The physician can assist the public immeasurably in the crusade for greater consumer protection.

When a product-related injury is sustained, usually the physician in the hospital emergency room is one of the first to be involved. The Office of Product Safety in the Food and Drug Administration has recognized this fact and has set up a system to gather facts quickly on accidents involving household products. Data are gathered from 119 hospitals and transmitted daily to a central data receiving area. There the statistics are reviewed and products which frequently cause injury or products causing serious injury receive priority. Time is of the essence. It is hoped that by quickly obtaining information on dangerous products, they will soon be taken off the market through legal steps or voluntarily.

The physician can also assist by informing the victim of his rights once a product related accident is noted. It is extremely important that the victim be made aware of his rights immediately in order that he does not destroy the evidence in the case. This writer is aware of two cases where people have been severely burned while wearing articles of clothing which ignited at a low temperature and burned rapidly. The charred remains were discarded, and the victims had no means of recovering for their damages.

Other cases of defective ladders and toys being thrown out are well documented. The physician should routinely advise victims of such accidents of their rights in a similar manner, as the worker is often advised of his rights under Workmen's Compensation. (Workmen's Compensation itself is an example of strict liability where the employer is held responsible for damages even if there is no negligence on the part of the employer in contributing to the worker's injury.)

In the field of drugs the physician also has a duty to protect the consumer. The patient relies on the knowledge of his physician in prescribing medication. Most physicians have first hand knowledge of drugs that have been placed on the market without adequate testing, only to be withdrawn later after too many people have suffered from dangerous adverse effects—i.e. the thalidomide babies and various side effects from use of The Pill which have resulted in several law-suit recoveries against the manufacturers for failure to warn of the side effects. Unusual or unexpected results after treatment with a drug should be reported to the manufacturers and the proper controlling authority for further investigation.

(Concluded on page 86)

ECOLOGY 1939 — (33 YEARS) — 2005 — (33 YEARS)

An attorney friend of ours is a fanatic on ecology. He feels that doctors should be more concerned about a new disease which he calls air pollution. People are the germs. Man may survive, but how will this contamination affect his quality of life and his well-being? It should be pointed out, incidentally, that organized medicine in Rhode Island pioneered in agitating for control of air and water pollution in this area.

The United States in the past 33 years has converted approximately the same amount of acreage from vegetation to concrete, asphalt, buildings, and other non-vegetation as was accomplished in toto from 1607 (John Smith) to 1939 (332 years). Vegetation in nature gives off oxygen and absorbs carbon and other impurities. The parking lots in the cities, in suburbia, and elsewhere and the super-highways produce no oxygen and absorb no impurities. Instead, they contribute generously to impurities in the area as well as creating other difficulties, such as excessive rain run-off, sewage disposal problems, and thermal imbalance.

What kind of facilities does man need for pas-

senger and freight travel? Prior to 1939 passengers and freight moved largely by railroad. Is this less convenient and less polluting? In the past 33 years trucks, autos, and airplanes have become dominant. Is this more convenient and more polluting for man? In 33 years petroleum reserves (at predicted consumption rates and including those in Alaska) will be nearly exhausted. Copper and iron supplies may run out. In time the oceans may be dead and irretrievable. Earth is a small planet, a spaceship in the galaxy. How does one adjust an ecological point of view to the economic imperatives for man's ultimate survival and well-being. Are they separable?

Just as data banks, toasters, refrigerators, autos, computers, and machinery yet to be invented will be obsolescent, will man also ultimately wear out and be replaced through metamorphosis by a creature not requiring oxygen and water to survive?

The answers to these questions lie in a dimly perceived future. Should we not, though, prepare for that day with more foresight than we have exerted in the past?

THE RHODE ISLAND JOINT COMMITTEE OF NURSES AND PHYSICIANS

Representatives from two professional organizations, The Rhode Island State Nurses Association and The Rhode Island Medical Society, have formed a joint committee to discuss and to make recommendations concerning the appropriate roles of the physician and the nurses in providing health care to the people of Rhode Island. This committee was created upon the recommendation of the National Joint Practice Commission, an inter-professional organization established by the American Medical Association and the American Nurses Association. This national committee is also investigating the related roles of the physician and nurse in providing quality health care to the people of the United States. It would work in cooperation with state counterpart committees addressing itself to the rise of the nurse clinician, the introduction of the physician's assistant, and the increased activity of other professions and allied health professions in activities long assumed to be the concern solely of the physician or of the nurse.

A Summary Report and Recommendations of The National Commission for the Study of Nursing and Nursing Education states: "To provide the numbers of qualified nurses needed to cope

with the problems of health care delivery in the United States, we must clarify nursing roles and recognize the career patterns for nursing practice."

The report says: "The key to action, however, lies in the discussion and development of the roles of the nurse in cooperation with the other health professions. This Commission recognizes that each profession has the right and responsibility to assess its own rules, but the critical need for joint action demands that congruent roles be planned and articulated among the health professions. Within the past few years, a number of promising avenues for role changing in nursing and medicine have come to dead end because of suspicion, fear of domination, or simple lack of understanding."

The work of the Rhode Island Joint Committee of Nurses and Physicians hopefully will prove a valuable contribution to the examination of roles and of functions in medical and nursing practice with definition of new and altered patterns. The Rhode Island Medical Society and the Rhode Island State Nurses Association will await with interest the recommendations which will emanate from this important study group.



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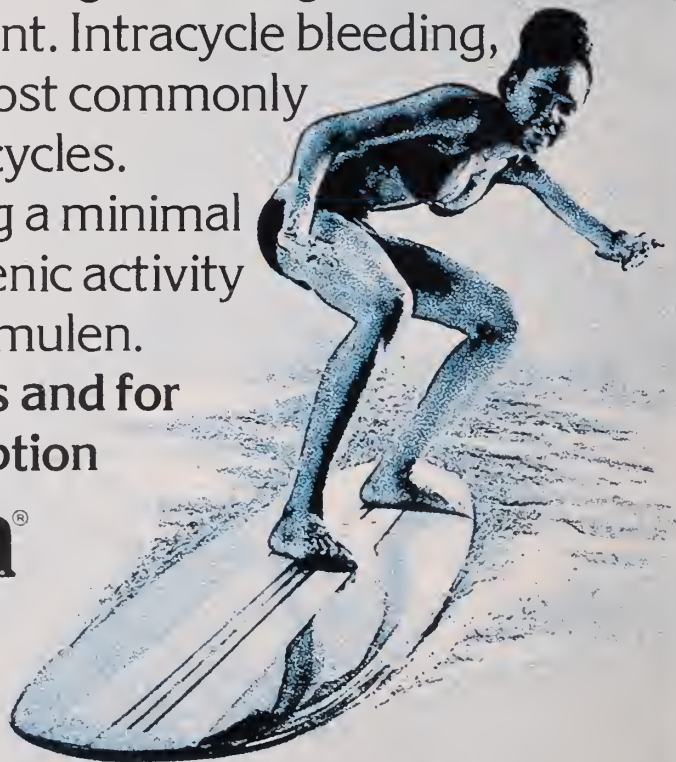
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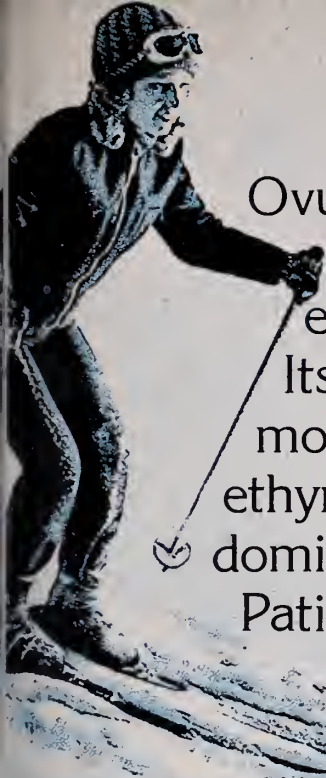
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Note: Oral contraceptives are complex medications.
They should be prescribed with care on an individual basis.
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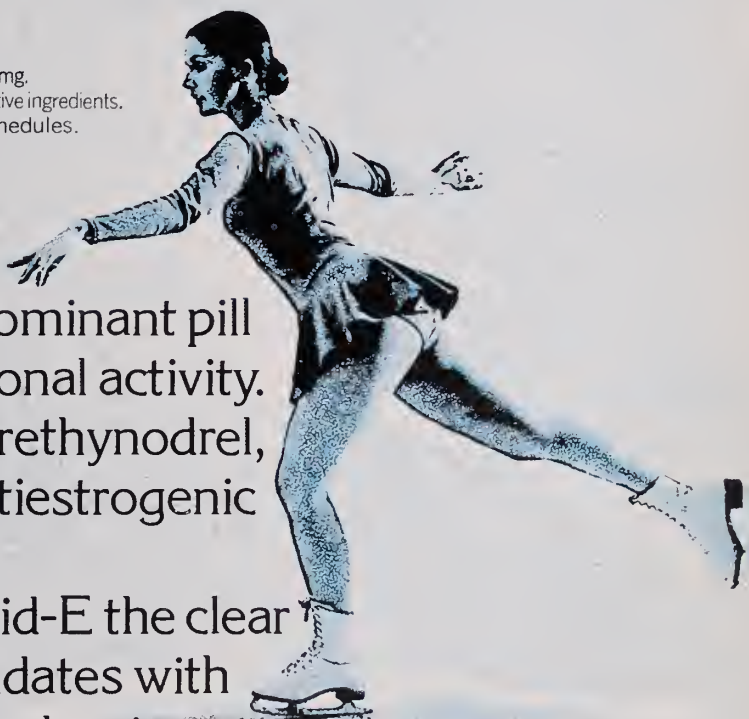
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Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain^{1,2} leading to this conclusion, and one³ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll¹ was about sevenfold, while Sartwell and associates³ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and

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the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function, increased sulfobromophthalein retention and other tests, coagulation tests, increase in prothrombin, Factors VII, VIII, IX and X, thyroid function, increase in PBI and butanol extractable protein bound iodine and decrease in T₄ uptake values, metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners. Oral Contraception and Thrombo-Embolic Disease. *J. Coll. Gen. Pract.* 13:267-279 (May 1967). 2. Inman, W. H. W., and Vessey, M. P. Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age. *Brit. Med. J.* 2:193-199 (April 27, 1968). 3. Vessey, M. P., and Doll, R. Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report. *Brit. Med. J.* 2:651-657 (June 14, 1969). 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E. Thromboembolism and Oral Contraceptives. An Epidemiologic Case-Control Study. *Amer. J. Epidemiol.* 90:365-380 (Nov.) 1969.

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The **Special Note**, **Contraindications**, **Warnings**, **Precautions** and **Adverse Reactions** listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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HOUSE OF DELEGATES REPORT

(Continued from page 52)

state won't be hurt by any questioning of their capability, but such tactics do a disservice to a patient if it results in any decrease in patients' confidence in their physicians. There is too great a relationship between patient confidence and patient improvement to take lightly any attack that seeks to destroy that confidence. If the insurance commissioner chooses to seek his care outside of the country, he'll pass a lot of people who are on their way to Pennsylvania for what they feel is some of the best medical care in the world". One need only recall the dedication to medicine in the state of Pennsylvania: historically the first medical school in America; the first hospital in America; in Philadelphia alone, the great University of Pennsylvania School of Medicine, Jefferson Medical College, Hanemann Medical School, Women's Medical School; recall the presence of great medical schools throughout the state; and the finest hospitals, clinics, and private practice facilities in the world. The absurdity of Mr. Denenberg's all-inclusive, sweeping remarks with regard to medicine in Pennsylvania should be remembered in assessing his judgment distorted by his zeal.

The Executive Director of Blue Shield has, however, aptly pointed out in his letter of September 6 the dangers of unrefuted propaganda and the big lie, as propagated by Mr. Denenberg. In the second paragraph of the September 6 letter he took note of the fact that regulatory agencies across the country and our own Director of Business Regulation would be reviewing Mr. Denenberg's statements. Does it not logically follow that somewhere in the communications from staff, be it by letters or Board Bulletins, critiques of Mr. Denenberg and his ideas should be displayed?

What about the guidelines themselves?

Generally it is quite clear, Mr. Denenberg feels that he, his department, and even Blue Shield are quite capable of replacing the Joint Commission on Accreditation of Hospitals, state licensing boards, special boards of internal medicine, surgery and the sub-specialties, peer review mechanisms, hospital internal audits, utilization committees, and tissue committees; and that a non-profit Blue Shield organization which is primarily designed to function as a fiscal intermediary should take over the control of medicine, not only its economic aspects, but its internal organization, professional standards and professional goals, which

it is in a position to do because of its economic pressure. And he intends that all this control be done by lay, non-professional consumers whose qualifications primarily are that they are consumers whose other qualifications are undefined; not licensed consumers, not certified consumers, nor consumers with continuing consumer education.

Quite simply, the issue is Consumerism versus Professionalism in the management of matters which most physicians hold are not exclusively theirs, but are part and parcel of the professionalism of medicine as defined by Hippocrates, Linacre, Boerhaave, Osler, Flexner, whose ideas are the basis of the foundation of every medical organization, state, national, and throughout the world. Because of the importance that Blue Shield and third party payers play in the professional lives of physicians, we cannot abrogate to non-professional consumers the primary direction of our profession. The position that Blue Shield holds in the professional lives of physicians makes it imperative that physicians have a realistic part in its control and direction.

Item 4 implies that Blue Shield should be deeply involved in the matter of continuing medical edu-

(Continued on next page)

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No. 10: Mr. Denenberg's ignorance is nowhere more profound than with the requirements that all drugs be prescribed for on a generic basis. I

We appreciate the work of the staff of Blue Shield and its efforts to publicize important material. It must publish pertinent material on both sides of the question.

ROBERT V. LEWIS, M.D.
President,
R. I. Medical Society

* * *

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REPORT OF THE SECRETARY

Stephen J. Hoye, M.D.

The Council has held two meetings since the previous meeting of the House of Delegates and the following constitute major actions taken:

1. The President was authorized to name a Nominations Committee to submit nominees for Delegate and Alternate Delegate from the Society to the American Medical Association for the term, January 1, 1973 through December 31, 1974.
2. The following were named to be the Society's official representatives on the Medical Economics Council of Rhode Island: Drs. Stanley D. Simon, John B. Cunningham, Philip Morrison, Thomas Perry, Jr., Charles B. Round, and Robert V. Lewis.
3. The Council reaffirmed the action of the House taken in March, 1972, urging a ban on smoking in public arenas, particularly the new Civic Center, and authorized a news release to the communications media of the state on the action.
4. The President was authorized to name a Bi-Centennial Committee to participate with similar committees in planning celebrations for the nation's bi-centennial in 1976.
5. A subcommittee of the Council was named to investigate a complaint against a member of the Society.
6. Approval was given the co-sponsorship of a seminar on physician incorporation with the Industrial National Bank, to be held on September 27, 1972.
7. The Council commended the President for his outstanding presentation before a state senate committee in opposition to the enactment of legislation that would establish a drug formulary, and the promotion of the use of drugs by generic rather than trade name.
8. The Council was informed of the establishment of the Rhode Island Chapter of the American College of Emergency Physicians.
9. Approval was given of a communication from the State Peer Review Committee to all third party payors for health services, and also a letter to all hospital utilization committee chairmen to alert them of the existence of the peer review mechanisms of the Society.
10. Approval was given for the Woman's Auxiliary to present an AMA-ERF check in the amount of \$1,907 sent to the Society as a contribution for the Brown University Medical School. Presentation was made by the Auxiliary at its 25th annual meeting held in May.
11. The Postgraduate Institute (formerly the New England Postgraduate Institute) has been reorganized as a Massachusetts Medical Society sponsored organization, and as a result the Council withdrew its nominee to the board of directors.
12. The Council commended the President for his personal communication to members relative to membership in the American Medical Association which resulted in more than 80 members continuing membership.
13. The Council was informed that many committees of the Society notably the Mediation, Child-School Health, Drug Abuse, Liaison with Brown University, Peer Review, Workmen's Compensation, Long Range Planning, Scientific Work, Delivery of Medical Care, Publications, Diabetes, and Emergency Medical Care, have been active during the summer months.
14. A report on the CHAMPUS program (medical care for dependents of the uniformed services) was given to the Council by the President after a conference with Colonel E. V. Allen, contracting office for the Office of Civilian Health and Medical Program of the Uniformed Services.
15. The President and Executive Secretary represented the Society at a hearing in July before the State Department of Insurance on proposed increases in professional lia-

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16. Senators Pastore and Pell were asked to support a federal bill reported out of a Senate Committee that would ban the manufacture and sale of cheap handguns.
17. Approval was given of the President's appointment as Trustee-at-Large to the Board of Trustees of the Medical Library for 1973 of Roger Fontaine M.D., of Woonsocket.
18. The President reported that he had recommended three members of the Society for possible appointment to AMA committees (Dr. John E. Farley, Committee on Drugs, Dr. A. A. Savastano, Committee on Sports Medicine, and Dr. Francis H. Chafee, Committee on Environmental Health).
19. The Council was informed that Dr. Robert Good, currently at the University of Minnesota Hospitals, and to be chief at the Sloan Kettering Institute in New York in January, has been named as the 1973 Chapin Orator, and also that Dr. Carl Hoffman, President of the AMA would also address the Society's annual meeting on March 14, 1973.

20. The Council was informed of the health planks of both the Democratic and Republican parties.
21. The Council was informed of a so called "public service" campaign launched by chiropractors in which the public would be urged not to use drugs but to seek chiropractic care instead. A letter to all communications media in the state was issued jointly by Doctor Lewis of the Society, and Dr. Peter D. Asadoorian of the state Osteopathic Society, urging careful examination of all material submitted for publication.
22. A survey of the membership of the Society was approved by the Committee on the Delivery of Medical Care to seek answers to how the membership feels about the current delivery of care, and possible changes in the future. The program will be funded by SEARCH which will print and mail the questionnaire, and subsequently tabulate the results for the Society.
23. The President reported that he had added as members of the Society's Committee on Alcoholism the following: Doctors W. J. H. Fischer, Colette Cunningham (Newport) and Dumitru Caramiciu (Kent).
24. The Council noted that under the chairmanship of Dr. John J. Cunningham this year RIMPAC had joined with eleven other states that have surpassed their all time high in the number of contributors to the Committee.
25. The Council was informed that the Society had protested the inequitable treatment accorded physicians under the wage price freeze, and that at a recent meeting of the Health Services Industry Committee decisions were made that are favorable to the profession but they will not be publicized until a future date.
26. The following appointments by the President were approved:
George Meissner, M.D., as representative on the Board of Directors of the Area Health Science Education Center.
Thomas McOsker, M.D., as representative on the Board of Directors of the Dr. John E. Donley Rehabilitation Center.
Serafino Garella M.D., Associate Director of the Division of Renal Diseases at Rhode Island Hospital, as representative of the

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Commission authorized by the General Assembly to study the advisability of the State Health Department purchasing two kidney machines for home use.

Bertram H. Buxton, Jr., M.D., as representative on the new Board of Progress for Providence, Inc.

Jeannette E. Vidal, M.D., as a nominee for a HEW review committee on the safety and efficacy of over-the-counter drug products.

* * *

REPORT OF THE TREASURER

John P. Grady, M.D.

1971 Professional Audit

Ward, Fisher and Company have completed their audit of our 1971 financial records and they have filed their report to me, stating that they have examined the records of the Society and the Medical Journal in accordance with generally accepted auditing standards and accordingly included in such tests of the accounting records and such other procedures as were considered necessary. In their opinion the statement of cash receipts and disbursements present fairly the cash transactions of the Society and the Journal for the year ended December 31 1971.

Agency Account

In the opinion of the bank's investment manager of the Society's account our present holdings should be maintained as the account is adequately diversified in quality holdings.

Analysis of Membership Payments

Currently the Society has 1,186 members of whom 1,043 are subject to annual dues, and 123 exempt for the following reasons:

Age	80
Illness or disability	12
Military service	2
Retired from active practice	21
Postgraduate work	6
Clergy	1
Non-resident (Navy)	1

123

Budget for 1973

Under a bylaw requirement I must submit at this time a budget for the year starting January 1. This task has been undertaken by evaluating our receipts and disbursements of 1971 as well as the records to date of the current year. I can only anticipate that the non-dues income will continue as of the current year, and that we can maintain our anticipated disbursements in 1973 in spite of increasing costs of operation of the Society's ac-

(Continued on next page)



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tivities, and the expense of unanticipated expenses such as we faced this year then our heating system collapsed and had to be replaced.

Ophthalmology Fund

To date 222 members have paid a total of \$1,185 as a voluntary contribution to assist in the court expense for the decision regarding the use of drugs by optometrists. The money has been paid to the Treasurer of the R. I. Society of Ophthalmology.

* * *

LONG RANGE PLANNING COMMITTEE

The Ad Hoc Long Range Planning Committee recognized from its first meeting that the role of the state Medical Society is a vital one for the medical profession in this era of increasing government intrusion in the payment for health services, and therefore it is necessary that our organizational structure be improved in every way possible to cope with the increasing volume of activity.

We have an excellent executive staff, and our record of accomplishment for the profession in this state is the equal of that in any other state in the country. But your Committee is strongly of the opinion that we must prepare for the future, and therefore its initial aim was to update the Committee mechanisms in order that the Council and the House of Delegates may be continuously informed of all activities of the Society timely.

For this reason your Committee proposes that all committees of the Society, elected and appointed, be assigned to Commissions — five in number — under the supervision of a *Commissioner*, a new office for the Society, who shall be an active member of the Society who holds no other office in the Society. The Commissions would be designated under the following titles:

- Commission on Community Relations
- Commission on Health Programs
- Commission on Professional Regulations
- Commission on Public Health
- Commission on Socio-Economics

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Committees will continue to operate under designated Chairmen, elected or appointed as the case may be, as at present. However, the five Commissioners, nominated by the President and elected by the House of Delegates, would supervise the committees, stimulating activity as necessary, and coordinating efforts where the activity engages more than one committee, and reporting on the work done, or contemplated to the President. In a manner the Commissioners might be considered as a special cabinet to aid the President.

Commissioners would be active and voting members of the Council, and members of the House of Delegates without voting power.

TENURE OF OFFICE

The question of tenure of office in the Society is spelled out as two year terms for Councilors from district societies, one year for Officers, and a maximum of five years for past presidents. Term of Delegates is established as one year. But there is no restriction on re-election of Councilors and Delegates, and for this reason the Ad Hoc Committee has given much thought and engaged in lengthy review and discussion of this problem. The issue also came before the American Medical Association at its recent meeting in San Francisco, and a resolution was adopted asking that state societies review their local situations and consider ways to attract more members to Society service.

Your Committee makes the following recommendations:

1. *House of Delegates of the Society*

A delegate to the House of Delegates of the Rhode Island Medical Society may serve a maximum of six (6) successive years, and shall be ineligible for re-election as a delegate for at least one year after such a six year term.

2. *The Councilors*

Present setup of one Councilor from each district or county society, the Officers (5), and the five most recent living past Presidents of the Society, would be augmented with the addition of five Commissioners nominated by the President and subject to election by the House of Delegates. The quorum for the Council would be changed from the present five to a new figure of twelve.

A Councilor, except Officers and Past Presidents, may serve a maximum of six (6)

successive years and shall be ineligible for re-election as a Councilor for at least one year after such a six year tenure.

NOMINATING PROCEDURE

Your Committee recommends that the Nominating procedure for Officers, delegates to the AMA, and for elected committeemen, be changed to provide that the Nominating Committee to present a slate to the Council be composed of two (2) Councilors elected from component societies to the Council, two (2) delegates elected by component societies to the House, all four to be named by the President of the Society who shall be the fifth member of the Committee. The Council would review the proposed slate and make its recommendation to the House which may entertain other nominations from the floor of the House.

RECOGNITION OF SPECIALTY GROUPS

With the organization of the Profession into specialty societies your Committee feels strongly that the State Medical Society should continue to be the official authoritative society of the physicians of Rhode Island, but its task should be supported by active cooperation of the specialty groups.

Therefore, it is proposed that an official representative nominated by each organized specialty group in Rhode Island, recognized by the House of Delegates, be elected as a member of the House without voting power.

In its study your Committee noted that the present House membership does have specialty representation as follows:

Surgery	16
Internal Medicine	*15
Pediatrics	8
General Practice	6
Obstetrics-Gynecology	4
Orthopedics	4
Urology	4
Ophthalmology	2
Anesthesia	1
Psychiatry	1
Radiology	1

*Includes allergy, cardiology, gastroenterology.

However, it recognizes that these members are elected by district or county medical societies and they are not necessarily spokesmen for their specialty group. Therefore, the opportunity would be provided for the specialty organization to name an official representative if it does not have a voting delegate in the House or it does not wish to designate a voting delegate as its official representative.

The adoption of these recommendations by the

House would require changes in the bylaws that would have to be voted by the membership. Amendments may be adopted by a majority of members present and voting at any general meeting of the Society, provided the amendments have a previous two thirds majority approval by the delegates at the House meeting when the amendments are proposed.

For the information of the House, a draft of the changes proposed by the Ad Hoc Planning Committee are set forth in bylaw form as APPENDIX A, attached to this report. Unless a general meeting is called prior to the annual meeting on March 14, 1973, action could not be taken until that date.

ROBERT V. LEWIS, M.D.

STANLEY D. DAVIES, M.D.

JOHN P. GRADY, M.D.

STEPHEN J. HOYE, M.D.

STANLEY D. SIMON, M.D.

WILLIAM J. MACDONALD, M.D.

APPENDIX A

Committee on Long Range Planning

PROPOSED BYLAW AMENDMENTS

(Deletions marked by - - - - ; New Wordings in CAPITALS)

ARTICLE VI. HOUSE OF DELEGATES.

Section 2. *Composition.*

The House of Delegates shall be composed of

- (1) delegates elected by the component societies, each component society being entitled to elect one delegate for each twenty (20) active members in good standing, or major fraction thereof, exclusive of intern and resident members, with the added provision that each component society shall be entitled to elect at least one delegate; and

- (2) The President, the President-Elect, the

(Continued on next page)

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Vice-President, the Secretary, the Treasurer, and the Immediate Past President; and

- (3) without power to vote unless elected as a delegate from a component society, the Editor of the RHODE ISLAND MEDICAL JOURNAL, the delegate and alternate delegate to the House of Delegates of the American Medical Association, the Director of the State Department of Health in Rhode Island, the President of the Rhode Island Medical Society Physicians Service, FIVE COMMISSIONERS OF COMMITTEE COMMISSIONS OF THE SOCIETY, ELECTED BY THE HOUSE UPON THE NOMINATION OF THE PRESIDENT OF THE SOCIETY; AND AN OFFICIAL REPRESENTATIVE NAMED BY EACH ORGANIZED SPECIALTY GROUP IN RHODE ISLAND RECOGNIZED BY THE HOUSE OF DELEGATES.

Section 7. *Election of Officers, Delegates to the American Medical Association, and Elected Committeemen:*

At its meeting in September on the even year the House shall elect a delegate and an alternate to the House of Delegates to the American Medical Association and annually at its annual meeting shall elect officers and elected committeemen. With respect to both elections the Council shall AUTHORIZE a nominating committee of five, CONSISTING OF TWO (2) COUNCILORS ELECTED FROM COMPONENT SOCIETIES TO THE COUNCIL, TWO DELEGATES ELECTED FROM COMPONENT SOCIETIES TO THE HOUSE, ALL TO BE NAMED BY THE PRESIDENT OF THE SOCIETY WHO SHALL BE THE FIFTH MEMBER OF THE COMMITTEE, which shall prepare a list of candidates to be presented to the Council. A list of nominees approved by the Council shall be mailed to the House at least one week prior to the meeting. Other nominations may be made from the floor of the House by any VOTING member of the House. All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect.

Section 10. (NEW) *Tenure Of Office*

A DELEGATE TO THE HOUSE OF DELEGATES OF THE RHODE ISLAND MEDICAL SOCIETY MAY SERVE A MAXIMUM OF SIX (6) SUCCESSIVE YEARS, AND SHALL BE

INELIGIBLE FOR RE-ELECTION AS A DELEGATE FOR AT LEAST ONE YEAR AFTER SUCH A SIX YEAR TENURE.

ARTICLE VII. THE COUNCIL.

Section 2. *Composition.*

The Council shall consist of the Councilors elected by the component societies, the five most recent living past Presidents of the Society, IF ACTIVE MEMBERS, the President, the President-Elect, the Vice-President, the Secretary, the Treasurer, AND FIVE (5) COMMISSIONERS ELECTED BY THE HOUSE OF DELEGATES UPON THE NOMINATION OF THE PRESIDENT.

Section . *Meetings.*

The Council shall meet bimonthly at such time and place as the President may determine. The President may call a special meeting of the Council on his own motion and must call a special meeting on the written request of SEVEN members of the Council. TWELVE members shall constitute a quorum. The President shall preside at the meetings of the Council and, in his absence, the Vice President and President-Elect in order. The Secretary shall keep a record of its proceedings.

Section 9. (NEW) *Tenure Of Office.*

A COUNCILOR TO THE COUNCIL OF THE RHODE ISLAND MEDICAL SOCIETY ELECTED BY A COMPONENT SOCIETY MAY SERVE A MAXIMUM OF SIX (6) SUCCESSIVE YEARS AND SHALL BE INELIGIBLE FOR RE-ELECTION AS A COUNCILOR FOR AT LEAST ONE YEAR AFTER SUCH SIX YEAR TENURE.

ARTICLE X. *Standing Committees, Boards of Trustees, AND COMMISSIONERS*

Section 1. *Names AND COMMISSIONS*

The standing committees of the Society, of which the President and the Secretary shall be members, *ex officio*, shall be the following: Committee on Scientific Work and Annual Meeting, Committee on Public Laws, Committee on Publication, Committee on Mediation, Committee on Medical Economics, Committee on Occupational Health, Committee on the Library, Committee on Public Relations and Policy, Trustees of the Rhode Island Medical Society Building, Trustees of the Caleb Fiske Fund, and Trustees of Special Funds. EACH COMMITTEE, OF THE SOCIETY, ELECTED OR APPOINTED, SHALL BE ASSIGNED TO A COMMITTEE COMMISSION

BY THE COUNCIL, AND EACH COMMITTEE COMMISSION SHALL BE UNDER THE SUPERVISION OF A COMMISSIONER WHO SHALL BE AN ACTIVE MEMBER OF THE SOCIETY WHO HOLDS NO OTHER OFFICE IN THE SOCIETY AND WHO SHALL REPORT TO THE PRESIDENT OF THE SOCIETY ON THE ACTIVITIES OF THE COMMITTEES WITHIN HIS RESPECTIVE COMMISSION GROUP. COMMISSIONS ARE DESIGNATED AS FOLLOWS: COMMISSION ON COMMUNITY RELATIONS, COMMISSION ON HEALTH PROGRAMS, COMMISSION ON PROFESSIONAL RELATIONS, COMMISSION ON PUBLIC HEALTH, AND COMMISSION ON SOCIO-ECONOMICS.

* * *

CONTINUING MEDICAL EDUCATION

The Committee on Continuing Medical Education has held several meetings and it has planned a Conference for the Accreditation of Teaching Programs for Graduate Education of Physicians by Community Hospitals on Saturday October 14, 1972 at the Medical Library Auditorium from 8 a.m. to 12 noon.

The conference would start with a continental breakfast, followed by a speech of welcome by Dr. Robert V. Lewis, President of the Society. Doctor Uhl would then summarize various types of Continuing Medical Education programs and Dr. Rutledge Howard of the AMA Department of Continuing Medical Education will describe what that organization hopes could be accomplished at the state level since the AMA House of Delegates has emphasized the creation of a state system of accreditation of programs in Continuing Medical Education instead of the use of field survey teams.

After a coffee break, the conference will include four sessions of approximately 20 minutes duration concerning Hospital Facility Support, Self Assessment Programs, Peer Review, and medical librarian functions as an Education Concept. The conference summary would then be presented by Doctor Uhl.

The Committee has appointed additional physicians to its membership so that every hospital administrator, Medical Staff Chief, and Directors of Continuing Medical Education would be aware of this important event. We urge the delegates to support this conference.

The CME Committee has also heard a report

of the success of the CME Conference in 1971 in Newport and of the action of the House of Delegates in January of 1971 which endorsed the Committee's recommendations regarding opposition to any negative incentives in CME and the exploration of positive incentives such as Self-Assessment approaches.

Respectfully submitted:

HENRY S. M. UHL, M.D.

Chairman

* * *

COMMITTEE ON SCIENTIFIC WORK AND ANNUAL MEETING

The Committee is pleased to report that Robert A. Good, M.D., Medical Director of the Sloan Kettering Institute in New York, has accepted our invitation to deliver the Charles V. Chapin Oration at the Annual Meeting of the Rhode Island Medical Society on Wednesday, March 14, 1973. Dr. Good, a distinguished authority on basic and clinical immunology, will receive the Chapin Medal and address the Society and its guests on some aspects of his work in immunology. We are confident that his lecture will be an outstanding contribution joining those delivered by preceding distinguished recipients of the Chapin Medal.

Respectfully submitted:

ROBERT P. DAVIS, M.D.

Chairman

* * *

MENTAL HEALTH COMMITTEE

The Mental Health Committee is most concerned about the fact that psychiatric services are not being included in many proposals for insurance and financing of Mental Health care, thus potentially depriving a great many people from its benefits. At the meeting of April 5, 1972, the Committee passed the following resolution:

Whereas it is evident that mental health care is a most substantial part of health care;

Whereas it has been demonstrated that if it is financially possible to insure mental health care in a variety of ways;

Whereas a great many public and private insurance plans and health care systems hold themselves out as providing *comprehensive* health care, without including mental health, which is misleading to the profession and the public; therefore be it

Resolved, that no insurance plan, public or private, not any health care and maintenance

(Continued on next page)

program be considered, or in fairness hold itself out, as providing "comprehensive" health care, unless it includes provisions for psychiatric services on the same level with all other medical services; and

Resolved, that this resolution be forwarded to the leading insurance companies in this state, including Blue Cross and Blue Shield; to the R. I. Group Health Association; to the Providence Health Centers, Inc.; to the Medical Associates of Bristol County, Inc.; and to the Committee planning the RIMS's R. I. Medical Foundation."

In other matters, the Committee recognized and highlighted the increasing importance of drug abuse and alcoholism and their many implications that concern all of medicine, not only psychiatry. It, therefore, proposed the creation of separate committees on drug abuse and on alcoholism.

In another resolution the Committee pointed out once more how essential it was that a qualified psychiatrist be appointed Director of the Institute of Mental Health.

The Committee joined other societies and hospitals in a suitable memorial to the late Dr. Harold W. Williams.

Respectfully submitted:

HUGO TAUSSIG, M.D.

Chairman

* * *

MATERNAL HEALTH COMMITTEE

On June 28, 1972 a meeting of the Maternal Health Committee was held at the home of Dr. Joseph J. O'Neill, M.D. Those present were Stanley D. Davies, M.D., Chairman, George Anderson, M.D., Harold L. Beddoe, M.D., J. Kenneth Beezer, M.D., Bertram Buxton, Jr., M.D., John E. Kerry, M.D., Walter R. Durkin, M.D., Herbert Ebner, M.D., John R. Evrard, M.D., William J. MacDonald, M.D., William Reid, M.D., Joseph J. O'Neill, M.D., Henry E. Turner, M.D., and John P. Wood, M.D. Six maternal deaths were discussed. One was an indirect obstetrical death, non-preventable. There were 2 direct obstetric deaths both possibly preventable, and 3 non-related deaths.

The inadequacy of autopsies performed by the Medical Examiner was discussed and it was suggested that perhaps a letter from Dr. Stanley Davies, the Chairman of the Maternal Mortality Committee, to the Attorney General might be helpful in improving the quality of autopsies.

After discussion of a case of ruptured cerebral

aneurysm it was pointed out that we have had several such deaths within the past several years. Even though these are non-related obstetric deaths it was the consensus that perhaps more aggressive management of these patients might result in salvage of some of them. It was suggested that we arrange a conference with some of the neurosurgeons and obstetricians to discuss the problem of aggressive management of subarachnoid hemorrhage.

The Committee would like to thank Dr. and Mrs. O'Neill for being such fine hosts and for the dinner which they served to the Committee after the meeting.

Respectfully submitted:

JOHN R. EVARD, M.D.

Secretary

* * *

PUBLICATIONS COMMITTEE

The Publications Committee met recently and the members agreed to enter into an arrangement with Brown University, Division of Biological and Medical Sciences, for the publication of its information concerning the University and the affiliated hospitals. Because of the lack of advertising, the JOURNAL had to reduce its size, but hopefully within the next three months, because of increased advertising, we shall be able to somewhat expand the publication.

Dr. Seebert J. Goldowsky, Editor-in-Chief, has reported to the Committee that he is now full-time medical director of the RHODE ISLAND MEDICAL JOURNAL.

Respectfully submitted:

JOHN A. DILLON, M.D.

Chairman

* * *

STATE COMMITTEE ON PEER REVIEW

In January, 1972 the State Committee on Peer Review was established. Since that time the Committee has had several organizational meetings and it has acted upon one case submitted to the Committee by Medicare. The Committee is now reviewing another case. The Committee has also drafted Guidelines for Meetings of Peer Review Committees.

Respectfully submitted:

ALTON M. PAULL, M.D.

Chairman

* * *

(To be Continued in March Issue)

RHODE ISLAND MEDICAL JOURNAL

SHORT BOWEL SYNDROME

(Concluded from page 71)

- mental evaluation of the nutritional importance of proximal and distal small intestine. *Ann Surg* 140:439-48, Sep 54
- ⁸Kinney JM, et al.: Loss of the entire jejunum and ileum, and the ascending colon. *JAMA* 179:529-32, 17 Feb 62
- ⁹Osborne MP, et al.: Massive bowel resection and gastric hypersecretion. Its mechanism and a plan for clinical study and management. *Am J Surg* 114:393-7, Sep 67
- ¹⁰Meihoff WE, Kern F, Jr.: Bile salt malabsorption in regional ileitis, ileal resection, and mannitol-induced diarrhea. *J Clin Invest* 47:261-7, Feb 68
- ¹¹Dowling RH, et al.: Effects of controlled interruption of the enterohepatic circulation of bile salts by biliary diversion and by ileal resection on bile salt secretion, synthesis, and pool size in the rhesus monkey. *J Clin Invest* 49:232-42, Feb 70
- ¹²Lack L, Weiner IM: Role of the intestine during the enterohepatic circulation of bile salts. Editorial. *Gastroenterology* 52:282-7, Feb 67
- ¹³LeVeen HH, et al.: Cause and treatment of diarrhea following resection of the small intestine. *Surg Gynecol Obstet* 124:766-70, Apr 67
- ¹⁴Mekhjian HS, et al.: Specific bile acids provoke secretion of electrolytes and water in the human colon. *Clin Res* 17:307, Apr 69
- ¹⁵Mekhjian OS, et al.: Colonic secretion of water and electrolytes induced by bile acids: Perfusion studies in man. *J Clin Invest* 50:1569-77, Aug 71
- ¹⁶Hofmann AF: The syndrome of ileal disease and the broken enterohepatic circulation: Cholerheic enteropathy. *Gastroenterology* 52:752-7, Apr 67
- ¹⁷Vlahcevic ZR et al.: Relationship of bile acid pool size to the formation of lithogenic bile in female Indians of the Southwest. *Gastroenterology* 62:73-83, Jan 72
- ¹⁸Bell CC, Jr, et al.: Relationship of bile acid pool size to the formation of lithogenous bile in male Indians of the Southwest. *Surg Gynecol Obstet* 134:473-8, Mar 72
- ¹⁹Danzinger RG, et al.: Dissolution of cholesterol gallstones by chenodeoxycholic acid. *N Engl J Med* 286:1-8, 6 Jan 72
- ²⁰Flint JM: The effect of extensive resections of the small intestine. *Bull Johns Hopkins Hosp* 23:127-44, May 1912
- ²¹Porus RL: Epithelial hyperplasia following massive small bowel resection in man. *Gastroenterology* 48:753-7, Jun 65
- ²²Loran MR, Crocker TT: Population dynamics of intestinal epithelia in the rat two months after partial resection of the ileum. *J Cell Biol* 19:285-91, Nov 63
- ²³Zurier RB, et al.: Use of medium-chain triglyceride in management of patients with massive resection of the small intestine. *N Engl J Med* 274:490-3, 3 Mar 66
- ²⁴Scheiner E, et al.: Malabsorption following massive intestinal resection. *Am J Clin Nutr* 17:64-72, Aug 65
- ²⁵Sedgwick CE, Goodman AA: Short bowel syndrome. *Surg Clin North Am* 51:675-80, Jun 71
- ²⁶Hofmann AF, Poley JR: Cholestyramine treatment of diarrhea associated with ileal resection. *N Engl J Med* 281:397-402, 21 Aug 69

- ²⁷Zurier RH, et al.: Effect of medium-chain triglyceride on cholestyramine-induced steatorrhea in man. *Gastroenterology* 49:490-5, Nov 65
- ²⁸Gibson LD, et al.: Segmental reversal of small intestine after massive bowel resection. *JAMA* 182:952-4, 1 Dec 62
- ²⁹Richardson JD, Griffen WO Jr: Ileocecal valve substitutes as bacteriologic barriers. *Am J Surg* 123:149-53, Feb 72
- ³⁰Stahlgren LH, et al.: A study of intestinal absorption in dogs following massive small intestinal resection and insertion of an antiperistaltic segment. *Ann Surg* 156:483-92, Sep 62
- ³¹Boley SJ, et al.: The use of antiperistaltic bowel segments following massive small bowel resection. *Bull Jewish Hosp* 2:12, 1960
- ³²Mackby MJ, et al.: Methods of increasing the efficiency of residual small bowel segments. *Am J Surg* 109:32-8, Jan 65
- ³³Thompson GR, Trexler PC: Gastrointestinal structure and function in germ-free or gnotobiotic animals. *Gut* 12:230-5, Mar 71
- ³⁴Kellogg TF, Westmann BS: Fecal neutral steroids and bile acids from germ free rats. *J Lipid Res* 10:495-503, Sep 69
- ³⁵Schiller WR, et al.: Production of artificial sphincters. *Arch Surg* 95:436-42, Sep 67
- ³⁶Salmon PD: The results of small intestine by-pass operations for the treatment of obesity. *Surg Gynecol Obstet* 132:965-79, Jun 71
- ³⁷Lillehei RC, et al.: Transplantation of stomach, intestine, and pancreas: Experimental and clinical observations. *Surgery* 62:721-41, Oct 67
- ³⁸Ruiz JO, Lillehei RC: Intestinal transplantation. *Am J Proctol* 23:379-83 Oct 72



CARDIAC CATHETERIZATION

(Concluded from page 60)

- ²⁴Merrill AJ, et al.: The circulation in penetrating wounds of the chest: A study by the method of right heart catheterization. *Am Heart J* 31:413-7, Apr 46
- ²⁵Nadas AS: *Pediatric Cardiology*. Second Edition. Philadelphia, W. B. Saunders Company, 1963
- ²⁶Olmsted JMD: *Francois Magendie*. New York, Schuman's, 1944
- ²⁷Richards DW, Jr.: *Harvey Lectures*. 1943-1944. The Science Press Printing Company, Lancaster, Pa.
- ²⁸Richards DW, Jr., et al.: Pressure of blood in right auricle of man, in normal conditions and in right heart failure. *Am J Physiol* 136:115-23, Mar 42
- ²⁹Robb GP, Steinberg I: A practical method of visualization of the chambers of the heart, the pulmonary circulation, and the great blood vessels in man. *J Clin Invest* 17:507, July 38
- ³⁰Ross J, Jr., Braunwald E, Morrow AG: Transseptal left atrial puncture. New technique for the measurement of left atrial pressure in man. *Am J Cardiol* 3:653-5, May 59
- ³¹Starr I, Jr., Collins LH, Jr, Wood FC: Studies of the basal work and output of the heart in clinical conditions. *J Clin Invest* 12:13-43, Jan 33
- ³²Zimmerman HA: *Intravascular Catheterization*. Springfield, Illinois, Charles C Thomas, 1966



STRICT PRODUCTS LIABILITY DOCTRINE

(Concluded from page 73)

A word of caution should be given. The victim's case should not be judged with the physician as the jury. Lawyers, too, often have told a prospective client that they did not have a case because it appeared that the victim's own negligence was the cause of the injury. In the *Ritter* case, it may not be obvious to the ordinary man that the range was defective. In *Anderson vs Klix Chemical Co.*, 472 P2d 806, the manufacturer was held liable for burns sustained by the plaintiff because it had failed to warn that the water in a vaporiser is hot. Another example is the case of an itinerant farm worker who was severely injured when using an insecticide which was clearly marked with warnings of the dangers in using the product. The only problem with the warning was that it was written in English only and the worker understood Spanish only. It was ruled that the manufacturer should have known that much of the farm work in the area where it marketed its product was performed by non-English speaking itinerant farm workers.

CONCLUSION

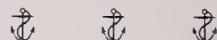
There is a need and desire for maximum consumer protection. The physician can assist the public in reaching its goals of safer products by assisting in the dissemination of information on product related accidents and by seeing that the rights of their patient-victims are protected by making the patient-victim aware of the possibility of a recovery for the damages suffered. The *Ritter* case now makes it simpler for the consumer to recover for damages as he no longer has to show negligence, but he must prove that a defective product was responsible for his injury.

Finally, the physician should be aware that:

1. The attorney has a role in advising the victim and his family of their recovery rights.
2. The public policy behind the shift of greater responsibility to the vendor, distributor, and manufacturer is to encourage the making of safer products, as well as to protect the consumer.
3. It is becoming increasingly unprofitable to manufacture and sell unsafe products as thousands of victims each year make claims and successful recoveries.
4. The victim, who is often the very young,

the very old, or the uninformed, should be reminded to save the evidence, i.e. the defective product.

5. Most injuries, just as most diseases, can be prevented. There is an important role for the physician, the safety engineer, and the lawyer in the fight for safer products and fewer victims.



CONSULTATION IN CHILD PSYCHIATRY

(Concluded from page 65)

Nutshell Summary:

Establish a contract.

Define your role.

Recapitulate the role and contract *ad infinitum*.

Support the healthy elements.

(This might be called setting the example of minding one's own business and avoiding the role of the hostile-do-gooder.)

SUGGESTED READINGS

Mental Health Consultation to Programs for Children. Review of data collected from selected U.S. sites, report (with list of references; prepared by Franklin B. McClung and Alastair A. Stunden), (1970). Public Health Service Publication No. 2066. Washington, U.S. Government Printing Office, 1971. (Use his history and for references to K Caplan, JW Brown)

Bey DR Jr, Smith WE: Organizational consultation in a combat unit. *Am J Psychiat* 128:401-16, Oct 71

Levinson H: Psychiatry in industry. *Psychiat Ann* 1:60-71, Oct 71

Farley GK: Mental health consultation with a head start center. *J Am Acad Child Psychiat* 10:555-71, Jul 71

Forman MA, Hetznecker WH: Varieties and vagaries of school consultation. To be published.

Hirschberg JC: The basic functions of a child psychiatrist in any setting. *J Am Acad Child Psychiat* 5:360-6, Apr 66

Pavenstedt E: The nursery school, day care centers, and developmental studies. *J Am Acad Child Psychiat* 5:349-59, Apr 66

Greenblatt M: Unfilled top jobs: psychiatry's administrative crisis. *Front Psychiat (Roche)* 2:1-2; passim, 1 Mar 72



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In the female: **1.** Prevention of postpartum breast manifestations of pain and engorgement. **2.** Palliation of androgen-responsive, advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or

who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

Contraindications: Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

Warnings: Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water

thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

Adverse Reactions: Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

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Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debili-

tated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or over-sedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the

elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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BALCONY



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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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Rhode Island Medical Journal

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MESSAGE FROM THE DEAN 89

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COVER: PERIPATETICS is walking about in connection with one's calling or as a traveller. Dr. Thomas Perry, Jr., our cover photographer, is an avid bird watcher. The Catbird, *Dumetella Carolinensis*, is from his collection of over 100 colored bird photos. The photograph was taken May 29, 1965 at Hope, Rhode Island with a 35mm Pentax camera with a 400mm Novaflex lens at 1/500 sec., f 5.6. High speed Ektachrome film was used.

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Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, edemas, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylureas, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmologic examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspnea, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity encephalitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

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MEDICAL EVENTS CALENDAR

Saturday, April 7, 1973

**THE EFFECTS OF HUMAN CONTACT ON NORMAL AND
PATHOLOGICAL CARDIOVASCULAR FUNCTIONS**

James J. Lynch, Ph.D.

Director of the Behavioral Laboratories, University of Maryland School of Medicine, Baltimore, Maryland

Rhode Island Hospital
George Auditorium
10:00 a.m.

Friday, April 13, 1973

THE MULTIPOTENTIAL CELL AND THE TUMOR PROBLEM

Armin C. Braun, M.D.

Rockefeller University, New York, New York

Brown University
Wilson Hall 102
4:00 p.m.

Thursday, April 19, 1973*

**PHYSIOLOGIC STUDIES IN THE ADULT RESPIRATORY
DISTRESS SYNDROME
COLLOQUIUM**

Samuel R. Powers, Jr., M.D.

Professor of Surgery, Director of Surgical Laboratory, Albany Medical College of Union University, Albany, New York,

Brown University
Barus & Holley 168
4:00 p.m.

Saturday, April 28, 1973

URINARY CALCULUS DISEASE

Wyland F. Leadbetter, M.D.

Clinical Professor of Surgery, Harvard Medical School, Boston, Massachusetts

Rhode Island Hospital
George Auditorium
10:00 a.m.

Monday, April 30, 1973

**BURGESS ORATION
NEW PLACES FOR BASIC SCIENCES IN MEDICAL
EDUCATION**

Lewis Thomas, M.D.

Dean, Yale University School of Medicine, New Haven, Connecticut

The Miriam Hospital
Sopkin Auditorium
8:15 p.m.

*Please note change of day.





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**"PHYSIOLOGIC STUDIES IN THE
ADULT RESPIRATORY
DISTRESS SYNDROME"**

Colloquium

SAMUEL R. POWERS, JR., M.D.

Professor of Surgery, Director of Surgical Laboratory, Albany Medical
College of Union University, Albany, New York

APRIL 19, 1973 — 4:00 P.M.

Barus and Holley Building, Room 168

Tea and Coffee will be served prior to the Colloquium

No admission fee; the public is cordially invited



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

BROWN RESUMES PHYSICIAN EDUCATOR ROLE

After 130 years of dormancy Brown University has resumed its role as an educator of physicians. The transition from a graduate school in the medical sciences to a coordinated program culminating in the M.D. degree, took place on the morning of January 31, 1973, when 12 Brown University students donned white coats and assumed their responsibilities as clinical clerks on the surgical services of the Rhode Island and the Miriam Hospitals. When the full clerkship program is operative, medical students will also serve at the Butler, Lying-In, Memorial, Roger Williams General, and Veterans Administration Hospitals.

These 12 charter medical students elected to remain at Brown University rather than take their two years of clinical experience at some other medical campus, as had their predecessors in the Master of Medical Science program. They will be joined, this August, by 48 other students (principally from Brown, but also from a number of other so-called two-year medical schools). This inaugural class of 60 students will graduate in June, 1975.

The core clerkship to be required of every M.D.

degree candidate consists of 56 weeks subdivided as follows: Medicine and related specialties, 12 weeks; Surgery and related specialties, 12 weeks; Human growth and development (including obstetrics and pediatrics), 10 weeks; Psychiatry, 6 weeks; Community medicine, 4 weeks; Clinical clerkship (selected by student), 12 weeks.

These mandatory clerkships must be taken at hospitals affiliated with Brown University. Subject to certain logistic constraints, students will be free to choose the location and sequence of their clerkships.

One-fourth of the total academic time in the last two years of the medical program has been set aside for medical students to involve themselves in productive activities other than the required clerkship experiences. For some students this may mean a resumption of personal research, for others, a return to classroom participation in the basic life sciences or humanities; and for still others, an opportunity for hospital-based specialty training.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs



House Of Delegates Of The Rhode Island Medical Society

Report of the Meeting of September 20, 1972

(Continued from February, 1973 issue)

COMMITTEE ON MEDICAL ASPECT OF SPORTS

The Committee on the Medical Aspects of Sports is busily engaged in attempting to get the help of a sponsor for a major meeting on the Medical Aspect of Sports during the summer of 1973. There is a reasonably good chance that a sponsor from Connecticut can be obtained to meet the expenses of conducting the meeting on a broad scale.

Respectfully submitted:

A. A. SAVASTANO, M.D.
Chairman

* * *

SOCIAL WELFARE COMMITTEE

Concerns of the Committee include continued adequate private medical care for the welfare recipient by the private sector while clinics and other groups experiment with their so-called comprehensive care plans at an enormous cost to the government.

In this vein, and working with the Society, the Rhode Island Medical Assistance Department, P. Joseph Pesare, M.D., medical director, will shortly implement a Federal regulation which became effective February 7, 1972.

Briefly, this regulation requires that persons under the age of 21 be examined (probably yearly) to ascertain their physical status and/or mental defects and that continuous health care, treatment and other measures be provided when necessary to correct or ameliorate defects and chronic conditions that may be discovered. A model form has been prepared for this purpose which the medical vendor will use on a one time basis for the six-year old for a comprehensive and diagnostic screening examination including appropriate referral and follow up activity for his patient. An equitable fee will be provided for this examination.

At the present time clinics and other groups are soliciting the Welfare Department to include the welfare recipient in their experimental pre-paid comprehensive health care plans. By executive order the Health Centers and R. I. Group Health

Association have contracts for the health care of welfare recipients. This proposed model examination and form will help the private sector continue maintaining private care for the welfare patient when he so chooses.

It has come to the attention of the chairman that welfare recipients living in Massachusetts and under private physician care have not and probably will not be reimbursed by Massachusetts for medical bills rendered prior to July, 1972 and still unpaid. Attempts to clarify this situation has brought vague responses. It is recommended that physicians who render care to Massachusetts welfare recipients contact Mr. Mintner or Governor Francis Sargent, Social Welfare Director and Governor of Massachusetts respectively, for further information. It would appear that hospitals may continue to be reimbursed for services rendered to welfare recipients from Massachusetts.

Physicians should keep medical fee profiles current and a matter of record if they hope to obtain any consideration from the intermediary fiscal agent in future updating of their charges. It is suggested that the physician consider placing his usual and customary charge on whatever form he fills out for the intermediary even though at times he may be reimbursed for less.

Respectfully submitted:

PETER L. MATHIEU, JR., M.D.
Chairman

* * *

BLOOD BANK COMMITTEE

1. Every five years a survey of blood banking activities in Rhode Island is conducted jointly by the Blood Bank Committee of the Rhode Island Medical Society and the Rhode Island Association of Blood Banks.

For the year 1971, blood needs statewide were met very satisfactorily and completely by our hospital blood bank system. 30,066 units were collected, of which 96 per cent came from volunteer blood donors (a truly wonderful percentage),

1 per cent from paid donors (mostly on-call hospital personnel) and 3 per cent only from commercial blood banks.

2. Because of this statewide almost total use of volunteer donor blood, the incidence of serum hepatitis is extremely low, approximately 1 per 2,000 transfusions.

Since blood banks are complying with the Standards of the American Association of Blood Banks — and most have been inspected and accredited under the AABB Inspection and Accreditation Program — routine donor screening for Australia Antigen is performed, further reducing the risk of serum hepatitis.

3. 24,259 blood transfusions were given in the state, of which 8,720 were transfused as packed red blood cells.

The outdated percentage amounted to 17 per cent, which is equivalent to the national average. The existence of many small hospitals and the necessity for keeping a blood inventory on hand drives this up to the level of 17 per cent. Constant efforts are made to keep this as low as possible.

4. The competence of our Rhode Island blood banks and the total success of the present system is obvious and deserves wholehearted support.

5. The commercial blood bank established in Rhode Island several years ago, located and drawing donors in Hoyle Square, has happily closed its doors.

6. The Division of Biologic Standards, traditionally responsible for inspecting and licensing those blood banks engaged in the interstate shipment of blood, has recently been transferred to the Food and Drug Administration. Rather promptly, Harry Meyer, M.D., FDA Director, announced that in the near future, *all* blood banks, hospital or community, whether small or large, inter- or intra-state in operation, would be inspected and licensed.

The basis for this decision is the long-standing and arbitrary listing of blood as a "drug" in the U. S. Pharmacopeia, over which the FDA claims complete control. To most blood bankers, blood is not a drug nor a product, but human living tissue; furthermore, blood bankers define blood banking as the practice of medicine all the way from donor selection to the transfusion of blood, and feel strongly that such inspection and licensure is a highly objectionable government intrusion into the private practice of medicine.

ENOLD H. DAHLQUIST, JR., M.D.

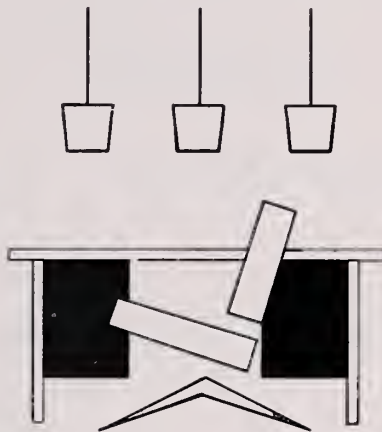
(Continued on Next Page)

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COMMITTEE ON OCCUPATIONAL HEALTH

We have had no formal, full, committee meetings since the last reported. However, informal discussions and problems have been noted:

The Occupational Safety and Health Act (O.S.H.A.) affects all types of businesses including the physicians office and, therefore, is so qualified under the provisions of the act. The American Medical Association House of Delegates did resolve to oppose these requirements as they affect the physicians offices. It was felt that this does not negate the requirements of the act and this Committee has suggested that the Society notify all physicians of same, so that their office will adhere to O.S.H.A. requirements. It should be noted several local industries have had numerous, recent and costly citations under the act.

Employment and pregnancy has created some problems in industry. Usually pregnancy has been accepted as employable to the seventh month on written approval of the patient's physician and the acceptability of same by the plant medical director. A letter from the obstetrician stating the pregnant employee can work to the eighth or ninth month is accepted by the R. I. Temporary Disability as a lay off by industry, so the patient is eligible to collect unemployment compensation. This raises the taxation percentage of industry thus increasing their financial liability to the fund.

The Occupational Health Committee of the AMA has withdrawn from circulation of its "Guide to Occupational Health Services for Women" because legal counsel believed some of its provisions were in conflict with recent court decisions under the Civil Rights Act of 1964.

For the present, under R. I. State Statutes and the opinion of this committee, it is felt the medical director has the authority, with consent of management, to formulate the medical provisions governing all phases of individual employment and employability.

Relative to pregnancy, termination of employment for normal pregnancy, for sedentary duties, is usually the seventh month, with the written permission of her attending physician.

Respectfully submitted:

THOMAS J. DOLAN, M.D.
Chairman

* * *

COMMITTEE ON ALCOHOLISM

The Committee on Alcoholism was reconstituted

(Continued on page 94)

The Department of Surgery of the Roger Williams General Hospital

Presents

**The Second Annual
Robert H. Whitmarsh Oration
MAY 9 and 10, 1973**



Bernard Fisher, M.D., Surgeon-In-Chief, Pro Tempore

**Professor of Surgery
University of Pittsburgh
School of Medicine**

WEDNESDAY, MAY 9, 1973:

7:30 A.M. —Surgical Staff Conference

**12:00 Noon—WHITMARSH ORATION — *Bernard Fisher, M.D.*
“Biological Considerations in the Management of
Primary Breast Cancer.”**

2:00 P.M. —Surgical Staff Presentations

THURSDAY, MAY 10, 1973:

10:30 A.M. —Papers By Staff Surgeons

12:00 Noon—CLINICOPATHOLOGICAL CONFERENCE — *Bernard Fisher, M.D.*

**All Meetings Will be Held in Kay Auditorium
at the Roger Williams General Hospital**

Hopkins

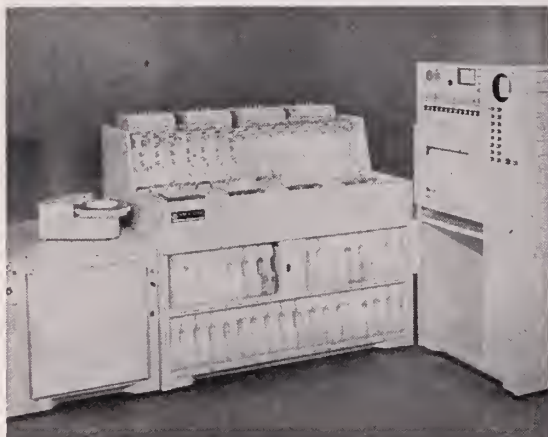
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TOTAL PROTEIN	MCH
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Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

HOUSE OF DELEGATES REPORT

(Continued from page 92)

as a new committee after having been merged with the Committee on Drugs for several years as a subcommittee to the Committee on Mental Health. The committee held its first meeting on Monday, September 18, 1972, and plans to take an active part in review of insurance policies to encourage coverage of alcoholism, per se, to provide active assistance in the integration of the various alcohol programs, which are sponsored by different agencies throughout the state, investigate the feasibility of a modern, intermediate care facility for detoxification and therapy for the chemically dependent, chiefly those related to alcohol, as far as this committee is concerned.

It has been abundantly clear for many years that the abuse of and the dependence upon alcohol is no respecter of economic or social status. The problems are clearly multiple disciplinary but are in crying need for a knowledgeable and empathic understanding by the members of our profession.

Respectfully submitted:

ROSWELL D. JOHNSON, M.D.
Chairman

* * *

ALLIED HEALTH PROFESSIONS AND SERVICES COMMITTEE

The Committee and invited guests met on February 17, 1972 and heard a talk by H. Youngken, Ph.D., Dean of the College of Pharmacy, University of Rhode Island on the proposed Area Health Science Education Center of the Tri-State Regional Medical Program.

The Chairman has, since then, represented the Rhode Island Medical Society as one of the incorporators of the Rhode Island Health Science Education Center (RIHSEC), in several meetings to search for and appoint a director for this program, which has been funded by the Tri-State Medical Program for a period of three years.

Other incorporators are as follows:

Institutions, Associations and Representatives

Rhode Island State Nurses Association, Christina G. McElroy, R.N.

Hospital Association of R. I., Jerome Sapolsky.
Brown University, Pierre M. Galletti, M.D.,
Ph.D., attending for Merton P. Stoltz.

Board of Regents for Education, Joseph L. Byron.

Rhode Island Consumers Council, Edwin P. Palumbo.

(Continued on Page 95)

"The history of science, and in particular the history of medicine...is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

**Are there significant
differences in bioavailability
and clinical predictability
among drug products?**

Opinion

Results of a questionnaire to
7,000 physicians:

44.6%

**Agree there is a significant
difference**

24.9%

Believe there is no difference

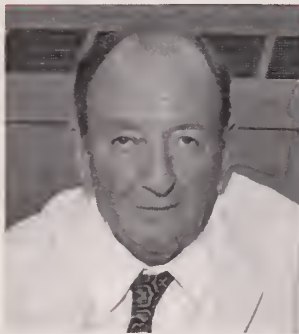
30.5%

Had no opinion

Are there significant differences in bioavailability and clinical predictability among drug products?

Teacher of Medicine

Alfred Gilman, Ph.D.
Wm. S. Lasdon
Professor & Chairman
Department of
Pharmacology
Albert Einstein
College of Medicine of
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalent

lency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

The Problem of Controlling Bioavailability of Generics

The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

Clinical Predictability More Important Than Price

Although the question of price has been greatly exaggerated, it is true that patients can on occasion save money on generic drugs. But you are not going to dare attempt to save money if it jeopardizes patient's health. Let's turn to the example of cardiac glycosides. This has become very prominent in recent years, that of cardiac glycosides. These are probably the most toxic drugs we use with respect to the small differences between a maximally effective dose and a toxic dose. When you are dealing with drugs of this type, the first concern must be clinical predictability. At the risk of variations in bioavailability, it would be sheer folly to try to save the patient what might amount to maybe \$10 or \$20 a year. The physician cannot manage his patient unless he is sure that the drug he is prescribing has the same positive effect each time the prescription is renewed. This is especially significant when the patient takes the product, not for himself but for the rest of his life.

Maker of Medicine

C. J. Cavallito, Ph.D.
Executive Vice President
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minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequiva-

lent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalence have appreciably improved.

Product Selection

Based on Patient Response

Improved specifications and standards can better assure the equivalence of *drug substances*. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the *drug product*, not the *drug substance*, that the physician, pharmacist, nurse and patient-customer utilize. How can these indi-

viduals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Although equivalence of different preparations of a *drug substance* may be defined by certain physical, chemical or biological characteristics, identity is not always assured even though these characteristics may be described in compendia such as the USP, NF or defined by other specific source standards. Moreover, even with equivalent *drug substances*, similar *pharmaceutical products* can be produced by different manufacturers such that these products are biologically or therapeutically equivalent.

A Growing Awareness of Potential for Nonequivalence

As experience increases with *drug substances* derived from different sources and under different conditions, it should be possible to establish specifications in sufficient detail to minimize the potential for their nonequivalence. However, there is general agreement that product therapeutic equivalence would still not be assured even if one could



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Clinical Data:

Patient: 47-year-old male.

Diagnosis: Severe pyoderma, left hand.

Culture: *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

Temperature: 102° F

Therapy: MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

Concomitant therapy: None.†



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Contraindications: Hypersensitivity to any tetracycline.

Warnings: The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has also been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug. **Pregnancy:** In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease

in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class.

Precautions: Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Because tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

Adverse Reaction: GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings.") When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

NOTE: Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN is not notably influenced by foods and dairy products.

*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.
†Case Report, Clinical Investigation Department, Lederle Laboratories.



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HOUSE OF DELEGATES REPORT

(Continued from page 94)

Tri-State Regional Medical Program, Johannes Virks, M.D.

Respectfully submitted:

GEORGE F. MEISSNER, M.D.

Chairman

* * *

PUBLIC LAWS COMMITTEE

A summary of the legislative action of the January, 1972 session of the Rhode Island General Assembly was published in the July issue of the RHODE ISLAND MEDICAL JOURNAL, Volume 55, No. 7, Page 205.

The Public Laws Committee reviewed over 200 pieces of legislation including 160 bills held over bills but none were of direct interest to physicians. from the 1971 session. The Governor vetoed 25 bills but none were of direct interest to physicians.

The Chief Executive did sign a bill which requires a rubella hemagglutination inhibition test before a marriage license could be issued. This measure received strong support of the Public Laws Committee. Rhode Island is possibly the second such state (after Colorado) to enact such a measure.

Three chiropractic bills held over from 1971 and three additional measures introduced this year all died in committee. One proposal provided that chiropractors be permitted to use a hypodermic needle or syringe in the treatment of patients.

In 1971, the Society introduced two bills concerning immunity for physicians and others engaged in the transfusion of blood and for compensation for induced hearing loss. The bills were not reported out of committee.

An act which would have made representatives of the public a majority of directors of nonprofit medical service corporations, including Blue Shield, was submitted to the House. It also died in committee.

Dr. Robert V. Lewis, President, testified in opposition to a drug formulary measure before the Senate Health, Education and Welfare Committee. The bill was not reported out of committee. Legislation of a similar nature failed to make progress in the House.

Supported was an amendment to a hearing aid bill which would offer medical protection to the public through participation of an otolaryngologist and an audiologist on the Board of Hearing Aid Dealers and Fitters and a provision that a hearing aid could not be sold to a child 16 years of age or under or an adult over 55 years of age without

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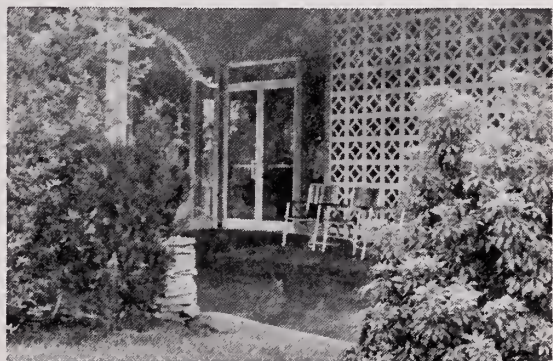
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Mrs. Herbert F. Hager and Mrs. Thomas Egan represent the Auxiliary to the Rhode Island Medical Society on the Conference Steering Committee.

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the recommendation of an otolaryngologist and an audiologist. The amended bill did not pass.

The November election will bring many new faces to the General Assembly; therefore, it behooves each District Society to plan to meet with their legislators and to educate them concerning the important issues confronting medicine.

Respectfully submitted:

F. BRUNO AGNELLI, M.D.

Chairman

* * *

COMMITTEE ON DRUG ABUSE

The Committee on Drug Abuse was the result of a merger between the subcommittee of the Mental Health Committee of the Rhode Island Medical Society and the R. I. Chapter of the American Academy of Pediatrics Committee on Drug Abuse. The latter group had as its goal the increased involvement of Rhode Island physicians in local community efforts concerning drug abuse and the encouragement of interagency collaboration by means of an "umbrella" approach.

Drug abuse is not solely a medical problem but the medical aspects are of major importance. Indeed it has been repeatedly demonstrated, that without the involvement of the medical com-

munity, genuinely successful action in this field seldom occurs. Medical community involvement in Rhode Island has been minor and isolated. The American Medical Association Conference on Drug Abuse in Phoenix in March demonstrated both the necessity for Society and individual physician commitment in community responsibility and also the integral need for an "umbrella" approach in large communities to prevent duplication of effort and fragmentation of services.

The Drug Abuse Committee of the Society has been focusing the hospital responses to the drug abuser both in emergency department contacts and hospital admission policies. Contemporary and updated treatment manuals have been distributed to all the emergency departments in the state as well as college infirmaries. Physicians on the staff of local hospitals have been encouraged to inquire about hospital policies regarding the drug abuser and attempts to influence these policies to assure that the patient with a drug problem is approached in the same manner as any other patient with an illness.

Legislative sophistication concerning laws dealing with drug abuse leaves much to be desired in Rhode Island. Approximately a year ago, legislation was introduced by both parties to bring about a revision in Rhode Island statutes concerning drug abuse. This would translate new existing federal legislation into state law. The desire was commendable and the revision sorely needed; however, this legislation was so inclusive, effecting so many different fields, such as pharmacy, medicine, and law enforcement that the Committee suggested to the Governor that this legislation was too important to pass hurriedly and the Committee requested that it be delayed until this past legislative session, but in the meantime an interdisciplinary commission be formed to thoroughly examine the intricacies of the proposed changes. The bills were not adopted, but the commission was never created.

This legislature never got to see those major revisions, however, because of the fate of a bill which this Committee and the Public Laws Committee interceded for (the Gladstone bill), which would have changed possession of Marijuana to a misdemeanor. The Committee felt that this was a key measure in the field of drug abuse not only from the standpoint of reality but also it seemed as if it was the only way indeed contact would truly be made with the person with a drug prob-

(Continued on Page 98)

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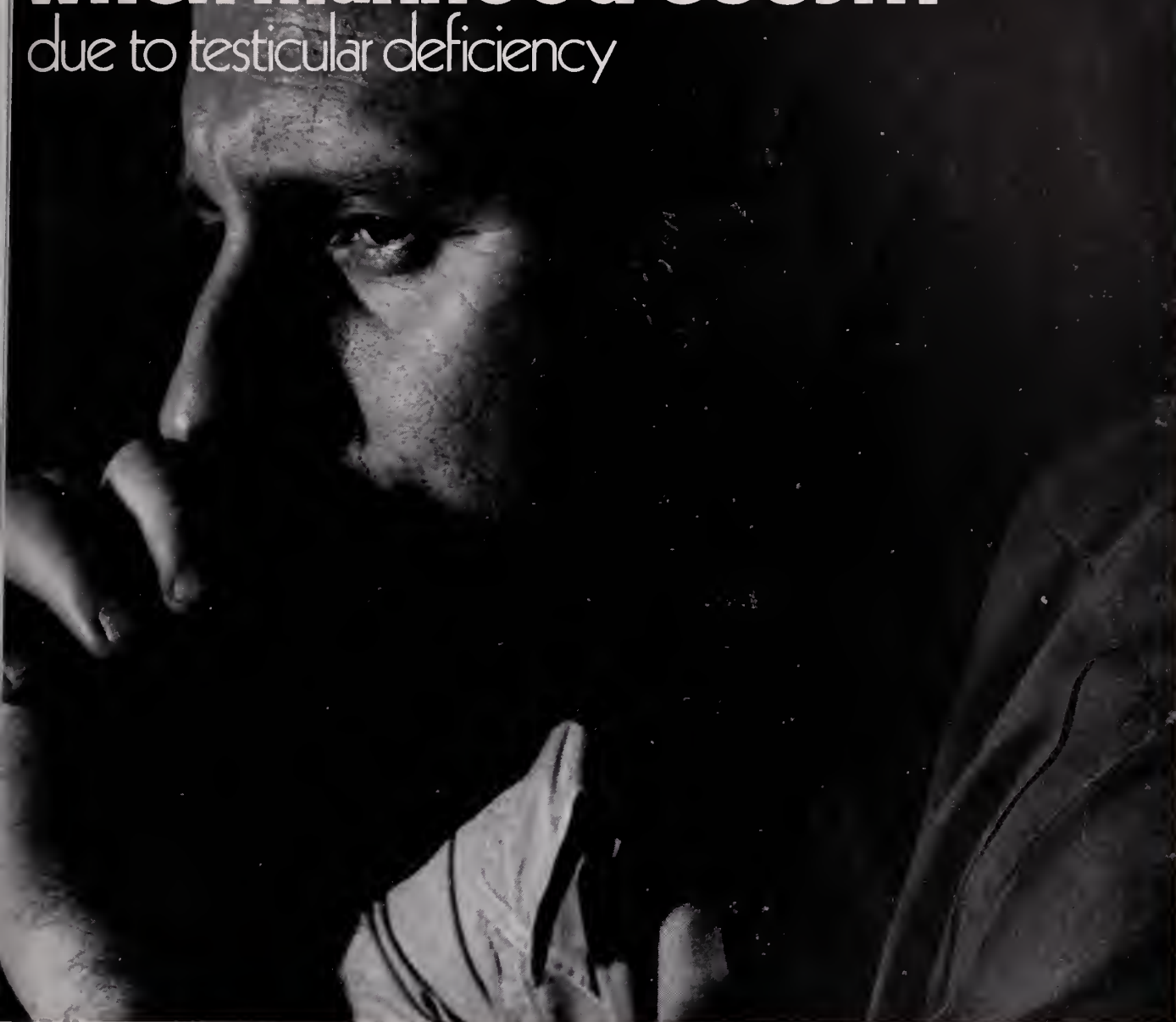
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Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water

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HOUSE OF DELEGATES REPORT

(Continued from page 96)

lem, when society demonstrated it was only interested in punitive approaches. In the House floor discussion of this bill, it sounded as if marijuana and heroin were similar substances. The bill was recommitted despite Society's efforts to reintroduce the bill. Because of this demonstration of the apparent negative legislative feeling, the major revisions of the law were never introduced. It appears that much legislative education must be accomplished if Rhode Island is to bring its legislative stance in line with the majority of other states.

The "umbrella agency" approach in some states means a non-governmental group which has accrediting and funding functions. In Rhode Island, which is in the primary stages of receiving fairly large federal monies, it appears as if the departments which are allocating the funds will not relinquish either accrediting or funding functions to a non-governmental agency. It therefore appears that what the AMA conference in Phoenix advocated as a model approach to community efforts Island. This is regrettable based upon other state to cope with drug abuse is not possible in Rhode and community experience. There is much recent

concern about the large amount of federal expenditure in what appears to be fragmented and uncoordinated local efforts. An "umbrella agency" seems more capable of preventing this than a governmental advisory committee approach.

Since it appeared as if the Governor's Commission on Drug Abuse, an advisory commission, was the only way in Rhode Island in which the concept of coordination could be effected, the Committee on Drug Abuse of the Society encouraged the Governor to expand the commission to include more medical representation and also more representatives of the community based drug abuse efforts such as RIDAC, a recently formed inter-agency group. The Governor apparently plans to do this shortly. The Committee plans to meet with RIDAC in the near future to see how we can assist them in their efforts.

Finally, the Committee sponsored a meeting at Rhode Island Hospital in January of 1973 of the combined medical and pediatric staffs involving a discussion of the role of the hospital in drug abuse. All emergency department personnel in the state were invited and the speaker was David Lewis, M.D., a national authority in the field, who met the hospital administrators prior to the discussion.

In another matter, the Drug Abuse Committee of the Society performed, in my opinion, an extremely valuable service to the people of Rhode Island and to the medical profession when through its initiative and zealotness secured the cooperation of the R. I. Department of Health to modify the implementation of provisions of a drug abuse reporting system (S 3467). The Committee was extremely active in securing the cooperation of the Department of Health in requesting only the initials and census tract of individuals reported under this law; thus, preserving anonymity and prevents further the separation of drug abuse from medical contact.

Respectfully submitted:

JOHN E. FARLEY, M.D.

Chairman

EMERGENCY MEDICAL SERVICES
COMMITTEE

The Emergency Medical Services Committee of the Rhode Island Medical Society has been extremely active in various areas since the Spring meeting of the House of Delegates. In April, Dr. Robert L. Conrad, Committee Chairman, and Edward J. Lynch, Assistant Executive Secretary of

(Continued on page 127)

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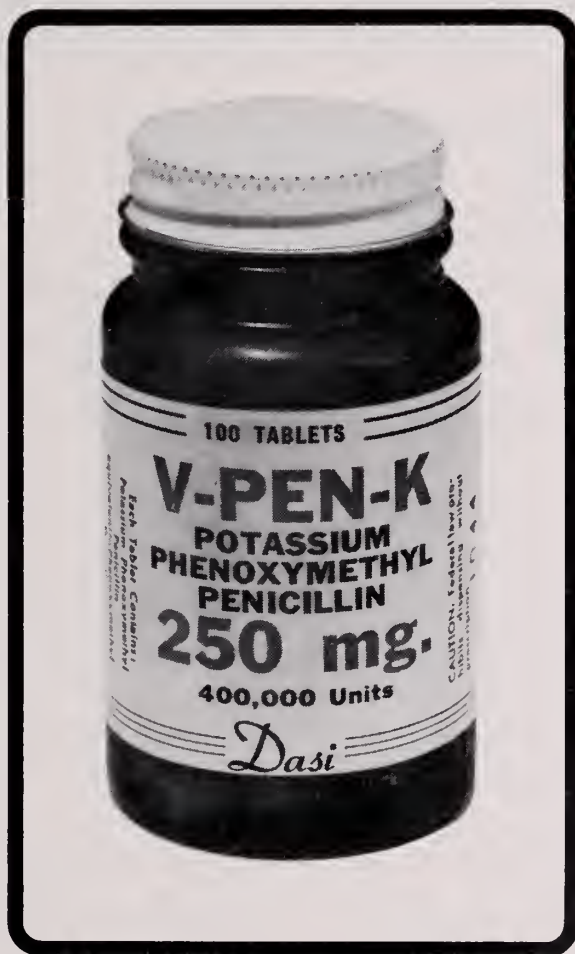
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1973 Annual Address Of The President Of The Providence Medical Association

*Physicians Must Decide Whether To
Innovate Or Let Others Innovate For
Them.*

By Joseph E. Caruolo, M.D.

There are far too many issues I could discuss, so that from among them I have selected four, which might be categorized as a birth announcement, two observations, and a recommendation.

THE BROWN UNIVERSITY MEDICAL SCHOOL

For 150 years the Providence Medical Association has helped provide quality medical care for the Providence area, but has done so in terms of an incomplete system. The Medical School at Brown University now provides the academic component previously lacking.

As The Providence Medical Association, Brown University, and other agencies vital to health care work together, each contributing its genius, medical care in Providence is bound to improve.

We must support the medical program at Brown University and must encourage all citizens to join in this effort.

ORGANIZATIONALLY FRAGMENTED MEDICAL CARE

The first observation I have to make is that while efforts are being made to make medical care more coherent for the individual, fragmentation is taking place at the organization level.

JOSEPH E. CARUOLO, M.D., of Providence, Rhode Island, Associate Director, Division of General Surgery, Roger Williams General Hospital.

**Delivered at the 126th Annual Meeting of the Providence Medical Association at the Colonial Hilton Hotel, Cranston, R. I., January 10, 1973.*

Experimental pluralism in the delivery of medical care is now a reality. This is salutary, for as medical needs change medical institutions must change to meet those needs. It is a bit disturbing, however, to observe a tendency for our several experiments to become isolated somewhat from the mainstream of medical care. If this trend continues, there may well be created a Medical Tower of Babel for the Providence area.

Divergence must take place in matters of comprehensiveness, internal governance, general structure, and societal relationships. However, there has been a divergence of value systems as well. There can be only one system of values having to do with ethics, for example. There can be only one system of measurement, able to measure precisely the meaning of labels such as "quality care" and "preventive medicine".

Without a value system and measuring instruments applicable to all medical effort, the evaluation of any medical experiment is but a function of perspective.

The local medical society provides the only forum in which all physicians can meet to establish and maintain standards relating to medical care.

An excellent example of what I mean is the Peer Review System. Peer review has been determined by important persons in Washington to be essential to the continued existence of private medical care.

(Continued on Next Page)

Medicine as we have known it and as it is practiced even in our experimental groups is essentially private practice as distinguished from socialized medicine. This mix of current and experimental systems cannot possibly be evaluated on an individual basis. The inherent weakness of internal review is obvious. The need for a universally applicable Peer Review System is unquestionable.

The Providence Medical Association, as a component of the Rhode Island Medical Society, has already constructed a Peer Review System. It is designed to apply to all medical practice by all physicians, and is open for participation through the mechanism of the local medical society to all physicians.

Strong area medical societies are necessary to prevent fragmentation of medical care, as well as for a host of other reasons.

They need professional and public support, but above all else they need active participatory effort on the part of all members.

THE MEDICO-LEGAL PROBLEM

My second observation concerns the medico-legal problem. It is no secret that its rate of growth may increase as the result of a recent court decision. What can this mean to the people of Providence? Ask any aggrieved person from California, whether he be a patient or third party payor suffering under the burden of medico-legally induced extraneous costs which add nothing to the quality and subtract from the quantity of medical care possible for a given area.

The intent and theory of the recent decision is not questioned. The right of every person to sue in court is an unalienable right, and no one would deny that there are patients entitled justifiably to compensation.

What I should like to emphasize are the unintended and practical effects the decision might well have.

As a United States senator lamented recently, one of the distressing problems of writing legislation in our very complex society is that the effect of a law may diminish to a vanishing point as it affects an intended beneficiary. He further pointed out that an intended beneficiary sometimes actually is victimized. Can it be thus with legal decisions? I think so.

The question is whether the provisions of the decision are to be malinterpreted — used as building blocks for harassing legal action. Terms such as “material risks”, “all scientific capability”, and full disclosure” may well be legal absolutes, but

they are in no way humanistic absolutes. In truth, they have a different meaning in every medical case. Full disclosure to a young executive about to launch a costly business venture, a husband and a father of a growing family, is one matter. Full disclosure to a frightened, anxiety ridden, suffering, senior citizen with no estate whatsoever, is another matter. I can think of few acts I could perform as a physician more cruel, counterproductive, and senseless than that of fully disclosing all material risks to such a patient.

What can the medical society do in addition to promoting strict adherence to medical ethics and the delivery of high quality medical care?

The medical society can educate its members to recognize those extraneous factors which engender the frivolous lawsuit. We can meet with members of the Bar Association and Judiciary to delineate the practicalities of the problem. We can educate the public to the many pitfalls and dangers of applying all diagnostic tests available as a legally defensive measure.

We can educate all concerned in the definition of defensive medicine. We should point out that defensive medicine will place a Saturn Booster beneath the already sky-rocketing medical costs.

Further, we can support the concept of a nation catastrophic health insurance, or a state program, or both, for many lawsuits are entered into simply because there is a vulnerable party, albeit an innocent one, associated with an unavoidable medical catastrophe. Finally, we can think about the idea of a medical no fault insurance, not identical to be sure, but similar to no fault auto insurance which is proving so successful in keeping out of the courts all but the most egregious cases.

It is fervently hoped that we will not have to pass through the period of travail as has the State of California, where there is so much general resentment to the medico-legal problem that legislation is now being considered which will impose the expense of a baseless lawsuit on the plaintiff. Imagine, if you will, the exquisite victimization of the patient who justly deserves compensation for an adverse medical result but who does not bring action because he is fearful of being tripped up somewhere along the legal pathways.

A MEDICAL FOUNDATION

The recommendation I present in outline tonight is admittedly premature, for its development is far from completed, but the spirit and philosophy which should gather behind it are overdue.

A committee of the Rhode Island Medical So-

but intimately involved in, your medical association has been meeting to discuss the future of delivery of medical care in Rhode Island. Its work has not been completed, and the following suggestion may or may not come out of committee. What follows is my own personal thought.

About a year and a half ago I realized that experimentation in the delivery of medical care should be the concern of every physician in the state, and appropriately and especially a concern of the average doctor who delivers most of the medical care. I concluded that thinking in this regard should be in terms of a foundation.

The foundation I envisioned would embody the concepts of 1) Fee for service, 2) Health Maintenance, 3) Pre-paid capitation, and 4) an Independence from the medical society, relating to it as would any other experimental group. Such a practice has been termed "Group Practice Without Walls".

Why fee for service? Because it is clearly the least expensive method of delivery for most medical services and can be tailored in settings variable enough to meet any patient need. I speak of the office visit as best illustrating this capability. Fee for service pays for no more medical care than is delivered. It stimulates the physician to produce optimally, even maximally. Yet, with modern computers and Peer Review, overutilization by patient and physician alike can be controlled. It guards against underutilization. It best preserves the physician-patient relationship, a phenomenon oft derided, and rarely appreciated until it disappears. Many people in England have learned this and are now developing a private fee for service system of their own. In England, you will recall, such a system must be paid for out of pocket after taxes have been paid to finance socialized medicine which simply does not meet the needs of all the English people.

Why health maintenance? Because there is a growing feeling among patients who want private care that it should be delivered in a more comprehensive and integrated manner. They know there is a need for uniform minimums of scope, quality, availability, and accountability, knowing also that they do not exactly know how to go about providing for these features. There is a need for standardization and mobility in record keeping, and so on.

Why pre-paid capitation? Because third party payors are increasingly being called upon to ac-

count for the monies they distribute. They see the HMO and pre-paid concepts as valid tools with which they might accomplish their obligations.

The federal government is an expanding third party payor on the medical scene and it is perfectly intrigued with these concepts. From certain perspectives it may be difficult to believe, but the government is not particularly hostile to current methods of delivery. It simply does not see them as suitable vehicles for the delivery of medical care as it wishes to purchase that care.

We may never see a national health insurance program as it has developed in other countries, but we may well, and will probably, see the federal government buying most if not all medical care dispensed in this country. A fine distinction but a crucial one, for around this point rotates the matter of self-governance in the medical world. Legislative and administrative attitudes have already begun to favor systems of delivery offering HMO and Pre-paid concepts. I doubt the government will ever ban any type of medical care delivery, but it will have no qualms about making some systems irresistably more attractive to consumers than others, and it has the clout to do this.

Why a foundation? It is one of the very few mechanisms possible that can vend care as the purchaser desires it while permitting at the same time a maximum of individuality to the physician.

A foundation with an externally supplied administration and electronic data processing capability would at first take up but a very small percentage of any one physician's practice. It would dispense medical care right along with the physician's regular practice. The percentage of foundation patients in any one practice would expand or contract as the needs of the future required.

My suggestion is in no way to be construed as destructive criticism of the present system by anyone for it has served the people well. I would constructively criticize it only in its capability to continue to serve indefinitely into the future. The times are going to change. Think back to your course in physiology where you learned that the essence of viability is the ability to adapt to change.

As your outgoing President I leave you with the thought that the most important decision physicians have to make is whether to innovate or

(Concluded on next page)

whether to let others innovate for them. If that decision is a positive one the level of participatory activity within the society must increase ten fold.

External changes take place whether we want them or not; internal changes take place only if we want them.



REMARKS OF THOMAS F. HEAD, M.D. IN ACCEPTING THE PRESIDENCY OF THE PROVIDENCE MEDICAL ASSOCIATION, JANUARY 10, 1973

At no time in history has the medical profession — not organized medicine — THE MEDICAL PROFESSION been under such attack. Daily, especially in our own local newspaper, we read sophisticated analyses of the real and imaginary ills of the medical system; how physicians are responsible for the increased cost of medical care; how National Health Insurance is the answer to all problems; how medical care is too important to be left to the physician.

The largest single factor in any cost analysis of medical care is the hospital factor. These costs are determined by the interaction of policies determined by: 1. Boards of Trustees of Hospitals, 2. Governmental planning agencies, and 3. Voluntary planning agencies.

First. In the Providence medical community, there are 144 members of Boards of Trustees. Of these, eight, or five per cent are physicians.

Second. There are according to the Governor's office, five commissions appointed dealing with medical care. There are 62 members of these commissions. Six, or less than 10 per cent are physicians.

Third. Of 38 members of the Health Planning Council of Rhode Island, four, or again slightly more than 10 per cent are physicians. On this council's Executive Committee there are 14 members, two are physicians.

Fact or Fiction? Doctors control hospital costs?

This is meant neither to detract from or to deride the efforts of those innumerable conscientious men who give so willingly of their time and talent to see that medical needs are met. Nor is this to be construed that these talents are not needed — they most desperately are. It is to suggest however that greater physician involvement is needed

in order to achieve that goal for which we all equally strive — high quality medical care at reasonable cost.

The scholar tells us that he who refuses to learn from history is doomed to be ruled by it. National Health Insurance has been grasped to the bosom of innumerable politicians as a newborn child to the breast of its mother. Historically, the government has assumed from the founding of the Republic, responsibility for: 1. Education, and 2. Courts, and, more recently, 3. Transportation.

I ask you: On the basis of the record what would the scholar project concerning the quality and cost of medical care under government run National Health Insurance?

Are the vast overruns in Medicare and Medicaid the harbinger of the need for future medical Lockheed bailouts, Grumman loans and as we read the other evening, 127 million dollars illegally spent by the Navy? Are we to see vast medical corporations dependent upon "political clout" for federal funds while the patient is lost sight of? Is this what we have to look forward to under government National Health Insurance?

These are but a few of the reasons that medical care is too important — not for the benefit of physicians — but for the benefit of patients, to have physician involvement eliminated or ignored. These are but a few of the reasons that physicians and their ladies must become not only members of, but intimately involved in, your medical association and its women's auxiliary. As individuals we can achieve little or nothing. The motto on the Great Seal of the United States "e pluribus unum", is peculiarly pertinent for today's physicians. The executive committee and officers of your county medical association beseech you — become involved in your county, state, and national organizations so that the voice crying out in the wilderness may be heard and more importantly heeded.

Thomas F. Head, M.D., of Providence, Rhode Island, member, obstetrical and gynecological staff, St. Joseph's Hospital.



Alpha-Fetoprotein In Patients With Benign And Malignant Disease Of The Liver

AFP Was Detected In 13 Of 23 Cases Of Hepatocellular Carcinoma

By Subhash Bajaj, M.D., Leslie Leduc, B.S., Raj K. Goyal, M.D., and Theodore Hersh M.D.

Alpha fetoprotein (AFP), present in human embryonic serum, is an alpha globulin which disappears from the circulation in the perinatal period.¹ AFP was first described in fetal calf serum² and subsequently in blood of various other mammalian species.³ Abelev and co-workers later detected this alpha globulin in the blood of mice harboring chemically induced hepatomas⁴. It was demonstrated that AFP, which is synthesized by

the neoplastic hepatocytes, disappears from the circulation after resection of the hepatoma. Tatarnov⁵ extended these findings to patients with primary cancer of the liver by demonstrating the presence in serum of a protein immunologically identical with AFP. These findings have been confirmed by other observers in different parts of the world.^{6, 7, 8} This study reports our findings in patients affected with various benign and malignant diseases of the liver tested for the presence of AFP by the technique of counterimmunoelectrophoresis, which is more sensitive than the usually employed method of double immunodiffusion in agar gel.

MATERIALS AND METHODS

Sera from 118 patients having a variety of diseases of the liver were investigated. The patients studied are enumerated in Table 1. In addition, 25 selected patients with Down's syndrome were included in the study, since these patients have been shown to have a high incidence of anicteric hepatitis and persistent Australia antigenemia, the particle associated with serum hepatitis.⁹ The diagnosis of hepatoma was confirmed by histological examination of liver tissue obtained by

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Table 1

Disease	No. Cases	α -Fetoprotein Positive	Australia Antigen Positive DCIE	Positive RIA
NEOPLASTIC DISEASES OF LIVER				
Hepatoma ^o				
Negroes	7	3	3	3
Caucasians	15	10	1	3
Orientals	1	0	0	1
Total	23	13	4	7
Cholangiocarcinoma	3	0	0	0
Carcinoma of Gall Bladder	2	0	0	0
Metastatic disease to the liver*	2	0	0	0
NON-NEOPLASTIC DISEASES OF LIVER	13	0	0	0
Serum Hepatitis	31	1+	26	31
Infectious Hepatitis	6	0	0	0
Chronic Active Hepatitis	16	0	7	9
Chronic Persistent Hepatitis	5	0	5	5
Halothane Hepatitis	1	0	0	0
Infectious Mononucleosis	2	0	0	0
Primary Biliary Cirrhosis	3	0	0	0
Laennec's Cirrhosis	9	0	0	0
Postnecrotic Cirrhosis	3	0	1	2
Polycystic Disease of Liver	1	0	0	0
Down's Syndrome	25	0	15	18

*4 Carcinoma of Stomach, 2 Carcinoma of Colon, 2 Carcinoma of Pancreas, 3 Carcinoma of Lung, 1 Each Carcinoma of Breast and Diffuse Carcinomatosis.

+Positive AFP Detected Transiently During the Acute Illness in Four Separate Samples Over a 19 Day Period and Disappeared as the Patient Recovered.

^oAntibody to Au/SH Antigen Was Found in 8 of 13 Cases (56.5%) by Passive Haemagglutination Technique.

DCIE=Discontinuous Counterimmunoelectrophoresis.

RIA=Radioimmunoassay.

percutaneous needle biopsy or at necropsy. The diagnosis in all the other patients was established by clinical criteria and biochemical tests and, when indicated, by percutaneous liver biopsy. AFP was sought by a counterimmunoelectrophoresis (DCIE) technique, using agar gel in barbital buffer of ionic strength 0.05 M at a pH of 8.6. The specimens were also tested for the presence of the Australia (Au/SH) antigen by both DCIE and radioimmunoassay (RIA) techniques. Antibody to Au/SH antigen was tested by both aforementioned serologic tests and by passive hemagglutination only in hepatoma patients.

RESULTS

AFP was detected in 13 of the 23 patients (56.5 per cent) affected with hepatocellular carcinoma (Table 1). Eight of these 13 cases (61 per cent) revealed concomitant presence of either Au/SH antigen or of the antibody to Au/SH antigen. The Au/SH antigen was present in 7 of these 23 patients (30.4 per cent), while the antibody to the Au/SH antigen was present in four other cases

harboring hepatoma. Thus, the incidence of exposure to the Au/SH antigen in hepatoma patients was 11 of 23 cases (48 per cent) and 8 of these 11 cases were positive for AFP (73 per cent). Table 1 also depicts the results of the detection of both AFP and Au/SH antigen in the other patients studied by the various serologic techniques employed. AFP was not detected in the patients having carcinoma of the bile ducts or gall bladder or in the other 13 cases affected with metastatic disease to the liver. Except for one case of viral hepatitis, AFP was not present in the patients suffering from acute or chronic disease of the liver. In the hepatitis patient, AFP was no longer recovered from her blood, as she experienced clinical and biochemical improvement while on corticosteroid therapy.¹⁰ The institutionalized cases of Down's syndrome revealed presence of Au/SH antigen in 15 of the 25 patients (60 per cent), but none had AFP.

DISCUSSION

The presence of serum proteins which are other-

wise specific for the fetus may reappear in blood in association with the development of malignant tumors. In 1963 Abelev⁴ first showed the presence of AFP in adult mice in which hepatomas were induced experimentally. In addition to AFP in primary hepatocellular cancer in humans,⁵ other fetal components in serum have also been described in colon cancer patients.¹¹ Various tumors have been shown to synthesize an isoenzyme of alkaline phosphatase (Regan isoenzyme) which has electrophoretic and chemical characteristics of the placental alkaline phosphatase.¹²

AFP is synthesized by perivascular parenchymal cells of fetal liver and in the gastrointestinal tract^{13, 14} and has a molecular weight of 70,000. It was first detected in the human fetus in 1956 by Bergstrand and Czar.¹ AFP disappears from the circulation in the perinatal period and remains undetectable in the adult when sought by the routine technique of immunodiffusion in agar gel.

Because of its presence in hepatoma cases, immunological demonstration of AFP is widely used as an aid in the diagnosis of these tumors. There are, however, geographical differences in the frequency of AFP in patients with hepatoma. The incidence varies from 40 per cent in Great Britain,¹⁶ 60 per cent in USSR,¹⁷ 75 per cent in South Africa,¹⁸ 80 per cent in Senegal,¹⁹ 67 per cent in Uganda,²⁰ to a reported wide range of 28 to 75 per cent in the United States.^{21, 22, 37}

The presence of AFP in hepatoma cases depends on the mode of development of the tumor. In all rats in which hepatomas were induced by a carcinogenic dye findings were positive, whereas in none of the animals in which hepatomas were induced by aflatoxins was AFP detected.²⁴ Au/SH antigen, the viral particle found in cases of serum hepatitis,²³ has been implicated as an etiologic factor in some hepatoma patients²⁰ and may be responsible for inducing production of AFP by the liver.

The present study also shows the increased frequency of AFP in sera of hepatoma patients particularly associated in those patients who also had exposure to the Au/SH antigen. AFP was detected in 13 of the 23 hepatoma patients (56.5 per cent); 8 of these 13 cases studied (61 per cent) revealed concomitant presence of either the Au/SH antigen or the antibody. In contrast, in our series of 11 hepatoma cases exposed to Au/SH antigen, 8 cases were positive for AFP (73 per cent). A similar relationship of AFP and Au/SH antigen has been

reported in the literature: 30 of the 45 (65 per cent) hepatoma patients from Uganda were AFP positive while 16 (53 per cent) were also Au/SH antigen positive.²⁰ Eighty-eight of 210 patients from Senegal (42 per cent) were both positive for AFP and Au/SH antigen,²⁵ suggesting a relationship between chronic hepatitis, hepatoma, and the presence of AFP. This relationship, however, has not been found in other studies from this country,^{25, 26} where the frequency of Au/SH antigen in the blood of hepatoma patients has not been as high as in the aforementioned studies. This apparent discrepancy may be related to the frequency of Au/SH antigen in the respective control populations where it is 2 per cent in Uganda, and 9 to 12 per cent in Senegal as compared to 0.1 per cent to 1.0 per cent in the United States.^{25, 27}

AFP has also been demonstrated in the sera of patients affected with germinal cell testicular and ovarian neoplasms, particularly those with widespread metastases¹⁵ and in some patients having carcinoma of the stomach with metastasis to the liver.^{28, 29, 30} It is also found in Indian childhood cirrhosis³² and has been demonstrated transiently in blood of children under one year of age affected with viral hepatitis and other hepatic disorders.³³ A few adolescents with serum hepatitis were also found to have AFP during the acute illness.^{21, 31}

A radioimmunoassay has recently been developed for detection of AFP.³⁴ With this method very low levels of 5 to 10 ng/ml of AFP have been found in the serum of normal subjects. Immunodiffusion techniques are not as sensitive to detect such low levels of AFP. With the use of radioimmunoassay the amount of AFP found in hepatoma patients ranges from 1 to over 100 mg/ml.

It has been suggested that the occurrence of fetal proteins in cancer cases may result from depression of a gene normally repressed in the differentiated cells of the adult. The occurrence of AFP in normal human serum suggests that the adult has hepatocytes which synthesize AFP. Similar results have been reported with the carcino-embryonic antigen¹¹ which is present in small amounts in normal colon.³⁵ These observations, which make it unnecessary to postulate dedifferentiation as the cause of appearance of fetal proteins in adults affected with cancer, in fact support an alternative theory that tumors arise from relatively undifferentiated stem cells.³⁶ The cells could still have the genes responsible for AFP

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production in the nonsuppressed form and presence of some AFP in minute quantities in normal adult patients suggests that its detection in disease states may be a quantitative rather than qualitative phenomenon. The evidence cited and our results suggest that exposure to Au/SH antigen may make this phenomenon more manifest in some patients affected with benign or malignant disease of the liver.

SUMMARY

Alpha fetoprotein was sought by a counter-immunoelectrophoresis technique in sera of 143 patients affected by a variety of acute and chronic diseases of the liver. It was present only in 13 of 23 hepatoma patients and transiently in one case of viral hepatitis. Of the 13 AFP positive cases of hepatoma, 8 had been exposed to Australia antigen (61 per cent), while of the 11 Au/SH antigen positive hepatoma patients, 8 also had AFP (73 per cent). The diagnostic significance of AFP in relation to co-existent hepatoma is discussed. Present evidence suggests that detection of AFP in sera is a quantitative rather than a qualitative phenomenon.

REFERENCES

- ¹Bergstrand CG, Czar B: Demonstration of the new protein fraction in serum from human fetus. *Scand J Clin Lab Invest* 8:174, 1956
- ²Pedersen KO: Fetuin, a new globulin isolated from serum. *Nature (Lond)* 154:575, 4 Nov 44
- ³Gitlin D, Boesman M: Fetus-specific serum proteins in several mammals and their relation to human alpha-fetoprotein. *Comp Biochem Physiol* 21:327-36, May 67
- ⁴Abelev GI: Study of the antigenic structure of tumors. *Acta Un Int Cancer* 19:80-2, 1963
- ⁵Tatarinov YS: Content of embryo-specific alpha-globulin in fetal and neonatal sera and sera from adult humans with primary carcinoma of the liver. *Fed Proc (Trans Suppl)* 25:344-6, Mar-Apr 66
- ⁶Alpert ME, Uriel J, deNechaud B: Alpha₁ fetoglobulin in the diagnosis of human hepatoma. *N Engl J Med* 278:984-6, 2 May 68
- ⁷Purves LR, Bersohn I, Geddes EW: Serum alpha-feto-protein and primary cancer of the liver in man. *Cancer* 25:1261-70, Jun 70
- ⁸O'Connor GT, Tatarinov YS, Abelev GI, et al.: A collaborative study for the evaluation of a serologic test for primary liver cancer. *Cancer* 25: 1091-8, May 70
- ⁹Sutnick AI, London WT, Gerstly BJS, et al.: Anicteric hepatitis associated with Australia antigen: Occurrence in patients with Down's syndrome. *JAMA* 205:670-4, 2 Sep 68
- ¹⁰Hersh T, Bajaj SC, Hollinger FB, Goyal RK: Alpha-fetoprotein in a patient with viral hepatitis. (Submitted for publication.)
- ¹¹Gold P, Freedman SO: Demonstration of tumor-specific antigens in human colonic carcinomata by immunological tolerance and absorption techniques. *J Exp Med* 121:439-62, Mar 65
- ¹²Stolbach LL, Krant MJ, Fishman WH: Ectopic pro-

- duction of an alkaline phosphatase isoenzyme in patients with cancer. *N Engl J Med* 281:757-62, 2 Oct 69
- ¹³Gitlin D, Boesman M: Sites of serum alpha-fetoprotein synthesis in human and the rat. *J Clin Invest* 46:1010-16, Jun 67
- ¹⁴Gitlin D: Sites of alpha-fetoprotein synthesis. *N Engl J Med* 285:1436-7, 16 Dec 71
- ¹⁵Smith JB, O'Neill RT: Alpha-fetoprotein. Occurrence in germinal cell and liver malignancies. *Am J Med* 51:767-71, Dec 71
- ¹⁶Foli AK, Sherlock S, Adinolfi M: Serum alpha-fetoprotein in patients with liver disease. *Lancet* 2:1267-69, 13 Dec 69
- ¹⁷Abelev GI, Assecritova IV, Kraevsky NA, et al.: Embryonal serum alpha-globulin in cancer patients: diagnostic value. *Int J Cancer* 2:551-8, Sep 67
- ¹⁸Purves LR, MacNab M, Geddes EW, et al.: Serum alpha-fetoprotein and primary hepatic cancer. *Lancet* 1:921-2, 27 Apr 68
- ¹⁹Uriel J, deNechaud B, Stanislawski-Birencwajg M, et al.: Le diagnostic du cancer primaire du foie par les methodes immunologiques. *Presse Med* 76:1415-7, 29 Jun 68
- ²⁰Vogel CL, Anthony PP, Mody N, et al.: Hepatitis-associated antigen in Ugandan patients with hepatocellular carcinoma. *Lancet* 2:621-4, 26 Sep 70
- ²¹Alpert E, Hershberg R, Schur PH, et al.: Alpha-fetoprotein in human hepatoma: Improved detection in serum and quantitative studies using a new sensitive technique. *Gastroenterology* 61:137-43, Aug 71
- ²²Stillman A, Zamcheck N: Recent advances in immunologic diagnosis of digestive tract cancer. *Am J Dig Dis* 15:1003-18, Nov 70
- ²³Blumberg BS, Gerstly BJS, Hungerford DA, et al.: A serum antigen (Australia antigen) in Down's syndrome, leukemia and hepatitis. *Ann Intern Med* 66:924-31, May 67
- ²⁴Stanislawski-Birencwajg M, Uriel J, Grabar P: Association of embryonic antigens with experimentally induced hepatic lesions in the rat. *Cancer Res* 27:1990-7, Nov 67
- ²⁵Prince AM, Leblanc L, Krohn K, et al.: SH antigen and chronic liver disease. *Lancet* 2:717-8, 3 Oct 70
- ²⁶Moertel CG, Gleich GJ, Hull EW: Australia antigen and primary liver cancer. *Am J Dig Dis* 15: 983-5, Nov 70
- ²⁷Hersh T, Goyal RK, Grubb MN, et al.: Blood groups, Australia (Au/SH) antigen, and viral hepatitis. *Lancet* 1:908-9, 1 May 71
- ²⁸Alpert E, Pinn VW, Isselbacher KJ: Alpha-fetoprotein in a patient with gastric carcinoma metastatic to the liver. *N Engl J Med* 285:105-9, 4 Nov 71
- ²⁹Kozower J, Fawaz KA, Miller HM, et al.: Positive alpha-fetoglobulin in a case of gastric carcinoma. *N Engl J Med* 285:1059-60, 4 Nov 71
- ³⁰Mehlman DJ, Bulkley BH, Wiernik PH: Serum alpha-fetoglobulin with gastric and prostatic carcinomas. *N Engl J Med* 285:1060-1, 4 Nov 71
- ³¹Geffroy Y, Denis P, Colin R, et al.: Presence d'alpha₁-foeto-proteine chez l'adulte an cour d'une hepatite virale traitee par corticotherapie. *Presse Med* 78:1107-8, 16 May 70
- ³²Nayak NC, Malaviya AN, Chawla V, et al.: Alpha-fetoprotein in Indian childhood cirrhosis. *Lancet* 1:68-9, 8 Jan 72

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The Nitro Blue Tetrazolium (NBT) Test In Clinical Medicine — Some Current Views

NBT Test Gaining Popularity As Adjunct To Infectious Disease Diagnosis. Practical Aspects And Common Pitfalls Discussed

By Patricia Farnes, M.D., Barbara E. Barker, Ph.D., Edwin N. Forman, M.D.

Chronic granulomatous disease of childhood (CGDC), an uncommon, fatal, sex linked disorder, is now generally cited as the prototype of defective intracellular neutrophil function. From investigations of the mechanism(s) of deficiency in this disease, a wealth of new information has evolved concerning basic metabolic properties of neutrophils. The most notable discoveries relate to (1) changes in the carbohydrate metabolism of neutrophils during phagocytosis^{1,2} and (2) the mechanisms by which bacteria are killed, intracellularly, by neutrophils.^{3,4}

It is known that incidental to bacterial phagocytosis — and triggered by a mechanism which is still the subject of dispute^{5,6} — normal neutrophils “turn on” increased glucose utilization through the hexose monophosphate shunt, and through the glycolytic pathway. The process is

necessarily accompanied by increased generation of H^{\bullet} , and this H^{\bullet} production appears to be a *sine qua non* for successful generation of hydrogen peroxide (which participates in killing of certain catalase-positive bacteria).⁷ Investigation of the neutrophils in CGDC revealed that the normal “turn on” (and hence peroxide production) did not occur,⁸ rendering the otherwise competent cells “impotent” in the killing of a variety of ingested bacteria.

A screening diagnostic test, which was the forerunner of the now popular spontaneous BT test, was devised by Baehner and Nathan⁹ specifically to detect patients with CGDC and their asymptomatic carrier female relatives. This test depended upon the ability of neutrophils which ingested latex particles to undergo the metabolic “turn on” and produce H^{\bullet} in quantities sufficient to reduce nitroblue tetrazolium (NBT) to a blue formazan. The blue formazan precipitate can be visualized microscopically in individual phagotytizing cells, and a scoring procedure allows assessment of the ability of the neutrophil population to undergo the normal metabolic response associated with particle ingestion. About 80-90 per cent of normal phagocytizing neutrophils turn blue in this test system.

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In CGDC, practically none of the neutrophils which ingest particles contain formazan. In the carrier state, from 30-70 per cent of the ingesting neutrophils reduce the dye to a blue color. The latter results are consistent with the expected deficits according to the Lyon hypothesis, by which random inactivation of the X chromosome in individual female cells leads to a split population of normal and deficient neutrophils.¹⁰ In the past several years we have identified three Rhode Island families with this disease.

In 1968 Park et al.¹¹ reported that populations of neutrophils from patients with bacterial infections, when tested directly from the circulation with NBT dye, showed a significantly higher proportion of formazan-positive cells than neutrophil populations from normal persons, or from those with non-bacterial disease. These observations suggested that the neutrophils in bacterial infections behaved as if the metabolic triggers associated with phagocytosis had been "turned on", even though the cells were not ingesting particles. The results led to the development of the spontaneous NBT test which has enjoyed increasing popularity as an adjunct to diagnosis of infectious disease problems.

The neutrophils are obtained from heparinized capillary or venous blood and are incubated directly with NBT to determine the amount of "turn on" *in vivo*. The results can be expressed in simple per cent positive cells, or in more complex fashion, according to the nomogram distribution proposed by Feigin et al.¹² An important supplement to the test is incubation of the cells with NBT after exposure to a standard amount of bacterial endotoxin. Normal cells "turn on" with this stimulus, and the intrinsic ability of the cells to undergo the normal metabolic adaptation is confirmed.

The physiological basis for the *in vivo* "turn on" of neutrophils in the presence of bacterial infection is still unclear. The appearance of formazan in the cytoplasm of reactive cells probably reflects increased cell membrane permeability to the dye, increased generation of H \bullet from the carbohydrate metabolism pathways, or both. It is now clear that a number of physical, chemical, and physiological circumstances (including the exposure to endotoxin) directed toward the cell membrane of the neutrophil can result in an increased NBT reaction.^{13, 14} Practically speaking, in clinical practice quantitative "turn on" of blood neutrophils shows a high correlation with untreated systemic bacterial infection^{12, 15, 16}. Presumably, the "turn

on" is associated with exposure of the circulating cells to circulating bacterial products.

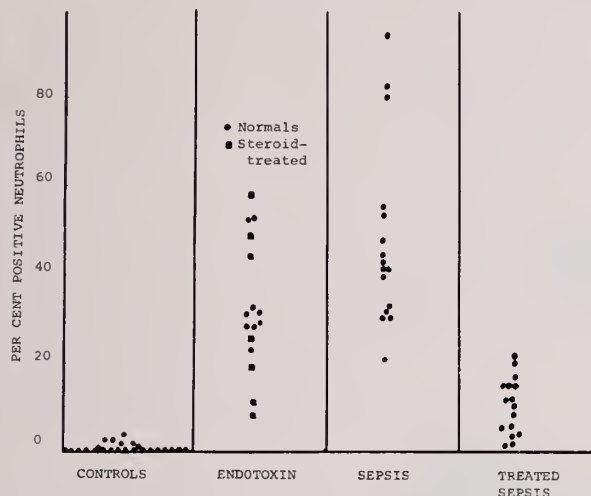
To date the chief applications of the NBT test have been based upon this assumed relationship. They are: (1) to identify the presence of untreated systemic bacterial infections (especially meningitis, pneumonia, and septicemia), (2) to serve as an index of effectiveness of antibiotic therapy in established cases of bacterial infection undergoing treatment, and (3) coupled with the endotoxin stimulation test, to provide a clue to both intracellular and extracellular abnormalities in neutrophil ability to respond to bacterial infections. In the past 18 months in our laboratory, we have performed more than 350 NBT tests on pediatric and adult patients. Recently we have also reported a micromethod for this test which can be performed from finger puncture blood, obviating the need for venipuncture. Some of our experiences with this micromethod, and especially consideration of the problems involved in interpretation of the NBT test in general, are presented here.

RESULTS, FALSE-POSITIVES AND FALSE-NEGATIVES

Ideally, the basis for clinical application and interpretation of the NBT test must rest on several assumptions. First, it is assumed that "normal" circulating neutrophils (which are actually *in transit* to tissue duties) are relatively impermeable to NBT; that is, some alteration in membrane function must occur to permit ingress of the dye. Also, the normal neutrophil relies primarily on glycolysis for energy production, and increased activity of the hexose monophosphate shunt, with subsequent H \bullet generation, is stimulated by membrane-mediated events such as phagocytosis. Therefore, unless provoked by some stimulating event or agent, normal cells show only occasional (less than 5 per cent) formazan development when removed from the circulation and incubated with NBT under standard conditions. It is assumed further that such neutrophils, if exposed to the action of endotoxin or other bacterial products, will become more permeable, alter their metabolism, or both, to mimic the carbohydrate adjustments associated with phagocytosis (even when none has occurred). This last point is important, because phagocytosis of bacteria by circulating neutrophils is an uncommon event. When it does occur, it is usually associated with advanced sepsis and a poor prognosis. Also, neutrophils which have entered the tissues do not return to the blood-

stream, so it must be assumed that "positive" cells in the circulation have been exposed, while circulating, to some circumstance which leads to membrane alteration.

TABLE I



Nitroblue tetrazolium scores of blood neutrophils, micromethod

In fact, the results presented in Table I show that "normal" blood neutrophils, with the micro-method employed in this laboratory, show minimal reducing capacity for NBT, while exposure to a standard endotoxin stimulation dose *in vitro* provokes a high proportion of "turn on". *In vivo*, a comparable "turn on" of neutrophils also occurs in bacterial infection, providing that there is access of appropriate bacterial products or byproducts to the circulating neutrophil pool. Factors which can play a significant role in determining the *in vitro* spontaneous neutrophil test score in bacterial infections include the extent of localization of infection, the short circulation time of blood neutrophils (hours), humoral factors now known to be necessary for neutrophil "turn on", and the intrinsic ability (or lack of ability) of the neutrophils of individual patients to undergo the appropriate metabolic responses. These factors are the basis for much of the continuing discussion here on "false-positive" and "false-negative" results.

The Venn diagram (Table II) provides a basis for consideration of "false-positive" (FP) and "false-negative" (FN) test reactions (see legend). The universe includes patients suspected of bacterial infections, and these patients may show elevated blood leukocyte count, fever, neither sign or both signs. While the diagram provides only qualitative relationships, the overlay of NBT test results represents a realistic representation of the

specificity of the test — that is, FP and FN reactions ought to be (and are, in practice) uncommon, as compared with valid reactions.

FALSE-POSITIVE REACTIONS

An FP reaction is defined as an elevated spontaneous NBT test score occurring in the absence of bacterial infection. Such reactions are in our experience rare, but it is essential to recognize their possibilities when using this test in clinical practice. For instance, parasitic infections may be associated with elevated NBT scores^{15, 17}. Malaria and Nocardia have been cited, and the mechanisms have not been investigated. In one case of documented malaria which we have studied, the reaction was not increased. In a series of dogs which we studied, we found that neutrophil "turn on" could be directly provoked *in vitro* by exposure of normal cells to an intravascular parasite (dog heartworm).¹⁸

The myeloproliferative disorders may present a problem in NBT test interpretation. Elevated NBT reduction has been described in the neutrophils of patients with polycythemia vera¹⁹, and there is at present insufficient evidence to conclude whether neutrophils of other myeloproliferative disorders may show spurious responses. Increased scores have also been observed in post-immunization states, and in the rare Chediak-Higashi syndrome.¹⁵ FP scores are well-known in the neo-natal period^{20, 21} and may persist up to two or three months of age. In this group there is great variability in score from individual to individual, and a negative test (in the presence of normal endotoxin stimulation) may be significant in ruling out infection. Preliminary experiments in neonates using the micro-method suggest that lower normal baselines in this age group might be achieved through manipulation of methodology. The basis for the FP reactions in neonates has been investigated, and appears to be due to increased metabolic activity of the neutrophils.²² There has been dispute about increased NBT scores reported in some patients with osteogenesis imperfecta.²³

In our own series we observed a persistently elevated score in a leukopenic cirrhotic patient who (after antibiotic treatment, and at autopsy) showed no evidence of active infection. The possibility of successfully treated infection could not be excluded, but it was of interest that the patient was heparinized. The action of heparin on neutrophil "turn on" is of critical importance in methodology

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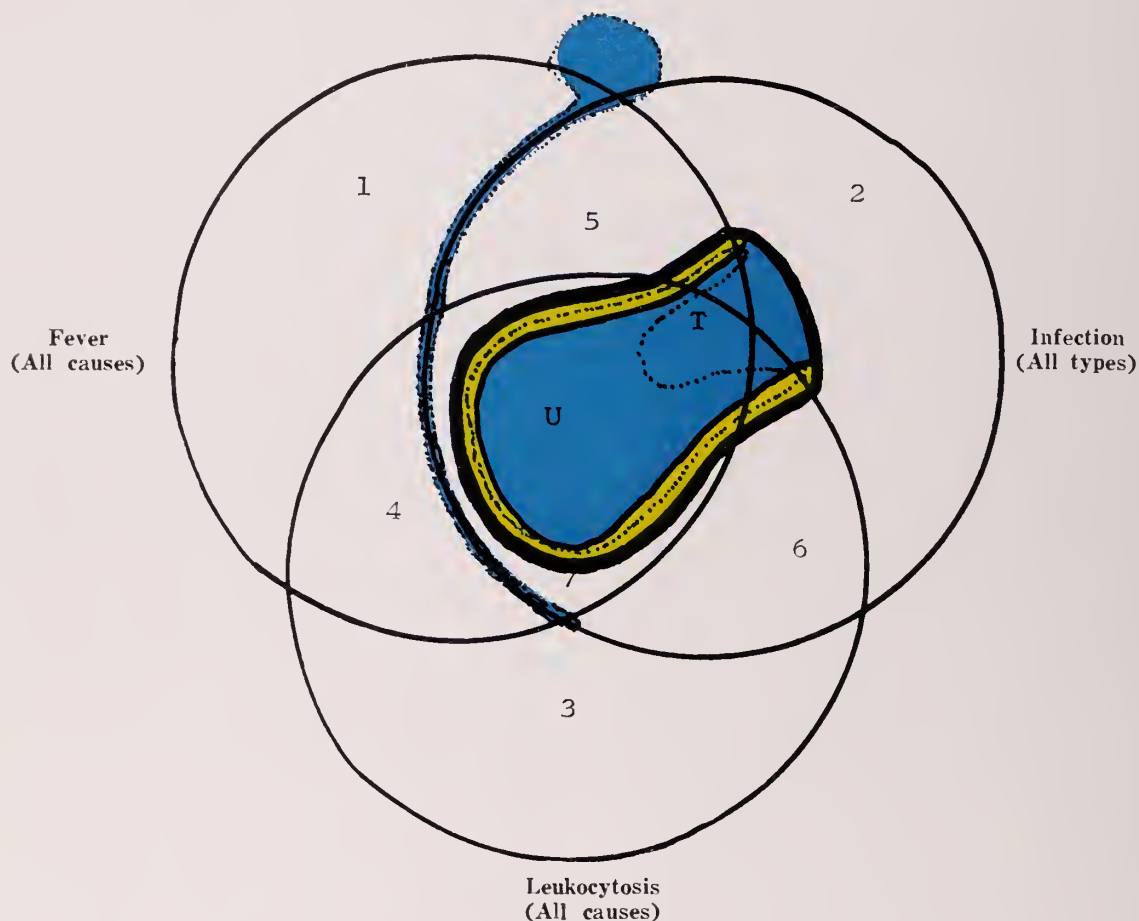
of the NBT test; indeed, the variable "normal" ranges reported by different authors may be in part related to differences in heparin concentrations. By mechanisms which are uncertain, heparin "turns on" neutrophils in a dose-dependent fashion¹⁴, and a critical (1 unit/ml) concentration of heparin is used in our test system. Whether *in vivo* heparin could result in a spurious FP test is not

established. The concentration achieved *in vivo* appear lower than those required to influence the test. In our studies other heparinized patients have shown normal NBT scores.

FALSE-NEGATIVE REACTIONS

An FN reaction is defined as one in which the spontaneous neutrophil NBT score is normal in a patient with demonstrated bacterial infection, or

Table II



The area surrounded by the heavy bar includes all bacterial infections, localized and systemic, treated and untreated, but excludes all nonbacterial infections (viral, mycoplasmal, parasitic). Patients with bacterial infections could show fever (5), leukocytosis (6), both symptoms (7), or neither symptom (2). Areas shaded in blue represent positive (elevated) NBT scores. Most, but not all, of the population of bacterial infections shows a positive test. In addition, a small population outside of the bacterial infection area shows a positive test. The dotted area within the bacterial infection group demarcates treated T from untreated U.

False-positives: The elongate arc of blue shading left of center shows distribution of false positive NBT scores. Patients in this group could show fever,

infection, leukocytosis, combinations of these, or none of these. However, no patient in this group has a bacterial infection. The patients include neonates without disease, parasitic infections, certain myeloproliferative disorders, rare neutrophil structural anomalies and post-immunization states.

False-negatives: The yellow shaded area within the bacterial infection group represents false-negative reactions. These patients could also show symptom combinations represented by (5), (7), or (6). All of them have bacterial infections. Causes of the false-negative reactions include treatment of bacterial infection, localized infection, steroid therapy, defective neutrophil function, and bacterial infectoins involving mainly cellular immune mechanisms.

in which exposure to bacterial products *in vitro* fails to "turn on" neutrophils. FN reactions are far more common than FP reactions. The most common causes of FN reactions are (1) localized infections and (2) treatment of the infection with an appropriate antibiotic.

Since it is assumed that circulating substances mediate the neutrophil "turn on", we could expect that neutrophil test scores in well-localized infections might be within the normal range. This seems to be the general experience of the test in a number of laboratories. Precise relationships between the extent of infection localization and expectation of NBT response have not been defined, and provide a significant clinical problem yet to be solved. Most available information is anecdotal, and controlled studies will be necessary.

More information is available on the effects of antibiotic therapy on systemic bacterial infections as they relate to the NBT test. It is known, for example, that very brief effective therapy (of the order of hours) may cause reversion of the test towards normal, or even to the normal range.^{12, 15} For this reason it is important that the test be obtained whenever possible prior to the administration of antibiotics. The rapid response of the NBT test to effective treatment provides another possible use of the test in bacterial disease. Failure of the test to revert in the face of therapy can provide an important clue to ineffectiveness of the selected antibiotic. In a case of meningitis with septicemia at Rhode Island Hospital, failure of an NBT test to convert led to a trial of a second antibiotic, and the ineffectiveness of the first was confirmed on the following day by the bacterial sensitivity studies.

While the effects of drugs on the NBT reaction *in vivo* are largely unknown, the inhibiting action of glucocorticoids on "turn on" has been widely discussed in the literature.^{23, 25} Review of the evidence provided by others and of our own experiences with steroid-treated patients (see Table I) suggests that many steroid-treated patients should present valid tests as judged by endotoxin responses. However, there are impressive exceptions, and the steroid-status of the patients must be taken into account in interpreting results. In one patient studied in our series, endotoxin stimulation *in vitro* was persistently depressed on three occasions while the patient received 12 mg of Decadron® daily. Three days after discontinuation of the steroids the endotoxin stimulation response was restored

to the normal range.

Certain bacterial infections involve primarily cellular immune mechanisms which are not associated with a classic neutrophil response. These infections, including tuberculosis, are not generally associated with marked elevation of the NBT score.

Among the most significant FN scores, especially in pediatric patients, are those encountered in neutrophil dysfunction states. The deficiency of neutrophil response can be due to intracellular defects, or to humoral abnormalities. Failure of neutrophils to "turn on" in the face of frank sepsis is an important clue (often the first) to such disorders, and the specific defects must then be searched for.¹⁶ In one of our cases (later discovered to be CGDC) there was failure of endotoxin stimulation in the standard test. In another instance this test was utilized to diagnose CGDC in a newborn whose mother was a known carrier of the disorder. In a third instance another suspected newborn was demonstrated by a positive test to be free of CGDC.

Finally, FN reactions occur when there is deficient humoral "opsonizing" capacity. In these cases neutrophils are incapable of "turn on" in the presence of bacteria which cannot be opsonized. The mechanisms by which deficient humoral factors prevent the normal neutrophil response, probably at the membrane level, is not clear. The most classic cases have been reported in patients with sickle cell anemia and pneumococcal or *Salmonella* sepsis.^{16, 21} These patients lack opsonizing capacity for pneumococci, a deficiency which relates to their functional asplenia.²⁶ Similar deficiencies have been reported in the nephrotic syndrome with pneumococcal peritonitis,¹⁶ and we have observed one of these in our own series. We have also studied a child with agammaglobulinemia and *Klebsiella* septicemia, in whom bacteria-containing neutrophils from peripheral blood failed to reduce NBT. In this case, phagocytosis of latex particles (which is opsonin-independent) was associated with formazan deposition in the ingesting cells.

It seems likely that further clinical associations with FP and FN reactions will be reported in the future. And it is evident that much remains to be learned about the applications and limitations of the NBT test in clinical medicine. Awareness of some of the factors currently recognized which influence the test should facilitate interpretation at the bedside.

(Concluded on page 132)

Neuropathological Findings In The Rubinstein-Taybi Syndrome

Syndrome Combining Broad Toes, Facial Abnormalities and Mental Retardation Manifests Interesting Neuropathological Findings

By Srecko Pogacar, M.D., Nedo F. Nora, M.D.,
and Thomas L. Kemper, M.D.

In 1963 Rubinstein and Taybi described a syndrome of broad thumbs, broad toes, facial abnormalities, and mental retardation.¹ Since that time, Rubinstein has collected more than 224 cases.² A variety of additional features including antimongoloid slanting of the palpebral fissures, hypertelorism, beaked or straight nose, prolonged nasal septum below the alae, broad nasal bridge, mild

abnormalities in position, rotation, size or shape of the ears, slight retrognathia, high-arched palate, and incomplete or delayed descent of the testes have been noted in the majority of the patients. Seventy-four of 89 reported patients demonstrated an intelligence quotient (I.Q.) less than 50 and thus fell into the category of moderate to profound mental retardation.³

In a search of the literature, we were able to find only three cases in which the neuropathology had been described.⁴⁻⁷ The most recent case^{6, 7} was published twice, first by Aoki, *et al.*, (1968) and later by Fukunaga, *et al.*, (1969). It is the purpose of this communication to describe an additional case and to compare the neuropathological findings with those previously reported.

REPORT OF A CASE

H. B. A-70-54/656, RIMC, was a severely retarded man who was admitted to the Ladd School, an institution for the mentally retarded, at age nine years and remained there until his death at age 33. He was the only child born to a healthy, 24-year-old mother and a 31-year-old father. There was no family history of mental retardation. Grand mal seizures began at age four. The patient was described as very affectionate, but he cried easily and had occasional attacks of screaming. He showed

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Presented in part at The Sixth International Congress of Neuropathology, Paris, France, September 3, 1970.



Fig. 1A. Facial abnormalities.



Fig. 1B. Note broad tip of thumb.



Fig. 1C. X-ray of the left foot. Note malformed broad distal phalanx of the great toe and remnant of the incompletely amputated sixth toe.

signs of compulsive behavior such as closing doors and arranging of his belongings. Penile erection was never observed. While eating he was able to hold his dish and use a spoon. On several occasions while eating, he would aspirate his food and, as a result, had multiple episodes of pneumonia.

Physical examination shortly before his death revealed the typical features of the Rubinstein-Taybi syndrome (R.T.S.). He was 152.4 cm tall and weighed 45.5 kg. The head circumference was 53 cm (second percentile), and the occiput was flat. Antimongoloid slanting of the palpebral fissures, long, sparse eyelashes, epicanthal folds, narrow upper lip, prominent thick lower lip, a protruding, partially bifid tongue, a high-arched palate, and a hypoplastic jaw were noted. The external ears were mildly malformed (Fig. 1A). Both thumbs were broad (Fig. 1B), and opposition to the other fingers was performed with difficulty. The fifth digits demonstrated mild incurving. Except for the thumbs, the joints of the fingers were lax. A surgical scar was present on the left foot, where a sixth toe had been amputated. The left knee could not be completely extended due to a contracture, and there was talipes equinus deformity of the left foot. The thoracic spine showed a scoliosis with a convexity to the right. His beard, moustache, and axillary and pubic hairs were sparse. The heart was unremarkable, and the liver and spleen were not enlarged. The testes were not palpable.

On neurological examination it was noted that the patient could not follow simple commands and had a vocabulary of approximately 10 words. His language comprehension appeared to be greater than was anticipated from his limited vocabulary. Cranial nerve examination was within normal limits. Although the muscles of the upper and lower extremities appeared small, no specific weakness could be demonstrated. However, muscle tone was decreased. The deep tension reflexes were moderately increased, and his gait was stiff, awkward, and limping.

Laboratory and Special Investigations: Blood counts and urinalysis were normal. Chromosome studies showed a normal karyotype. X-ray studies of the head revealed a small skull with supraorbital bulging. The cranial vault was thick, particularly in the frontal areas. The coronal sutures were united, but there was a failure of fusion of the central part of the sagittal suture. The sphenoid

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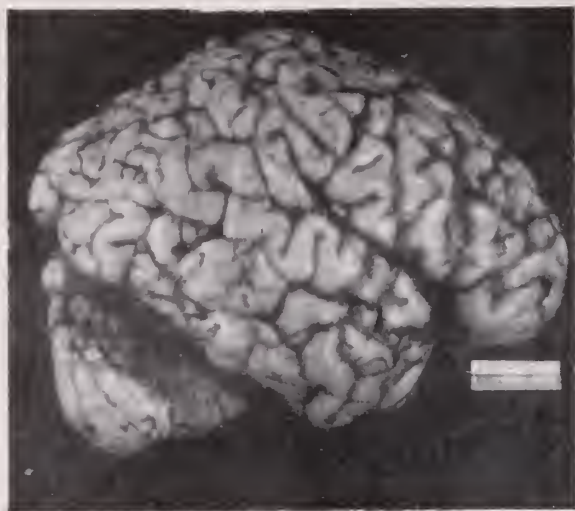


Fig. 2A. Lateral view of the gross specimen of the R.T.S. brain. Note underdevelopment of the frontal lobes, parietal-occipital region, and operculum.

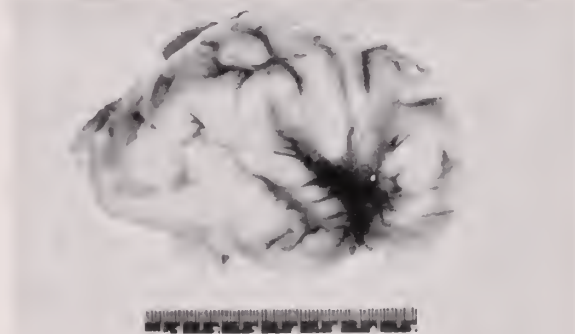


Fig. 2B. Lateral view of the brain of a 29-week gestational age human fetus. The overall shape of the brain is similar to the R.T.S. brain. The brain size is, however, considerable smaller, and the gyral pattern is less complex.

sinus was large and ballooned. Radiographic studies of the hands and feet demonstrated broadening of the distal phalanges of both thumbs and both great toes, with a malformation of the terminal phalanx of the great toe, which was more marked on the left side (Fig. 1C). A remnant of the amputated sixth toe was noted arising from the distal end of the right fifth metatarsal bone (Fig. 1C). The chest x-ray film and an intravenous pyelogram were unremarkable. An electroencephalogram was abnormal because of diffuse slowing and spike and sharp wave complexes.

Course: On October 23, 1969, the patient was found cyanotic and in respiratory distress and died the same day from aspiration of food.

Postmortem Examination: The general autopsy, performed 10 hours after death, revealed

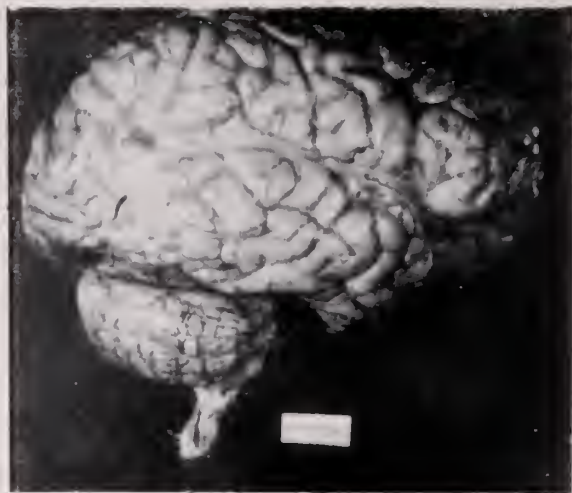


Fig. 2C. Normative control brain from a 32-year-old female for comparison with Fig. 2A.

atelectasis of both lung bases secondary to aspiration of food.

The brain weighed 1,015 grams (average in adult males is approximately 1,300 to 1,500 grams⁸). Its gross appearance was striking (Fig. 2A). The frontal lobes were foreshortened, and the parietal-occipital area was hypoplastic. The temporal lobes, however, appeared to be disproportionately large. The Sylvian fissures demonstrated a steep inclination. The opercula were poorly developed and incompletely covered the insula. In configuration the brain was similar to that of a 29-week-old fetus (Fig. 2B), although the gyral pattern was more complex. Mild irregularity of the gyri was noted, particularly in the association areas of the frontal, parietal, and temporal lobes. The temporal gyri were broad and the sulci of the superior and middle temporal gyri ill defined (Fig. 2A).

The leptomeninges in the sulci over the dorso-lateral surface of the brain were slightly opaque. At the base of the brain the large arteries appeared to be thin-walled and translucent. The right posterior communicating artery was found to be unusually large and the proximal part of the right posterior cerebral artery (mesencephalic artery) small. The spinal cord was not available for examination.

The fixed brain was cut into slabs in the frontal plane. Multiple blocks from the forebrain, cerebellum, and brain stem were embedded in paraffin and in celloidin. For evaluation of myelination and cytoarchitectonic maturation of the forebrain, two of the large celloidin-embedded frontal blocks

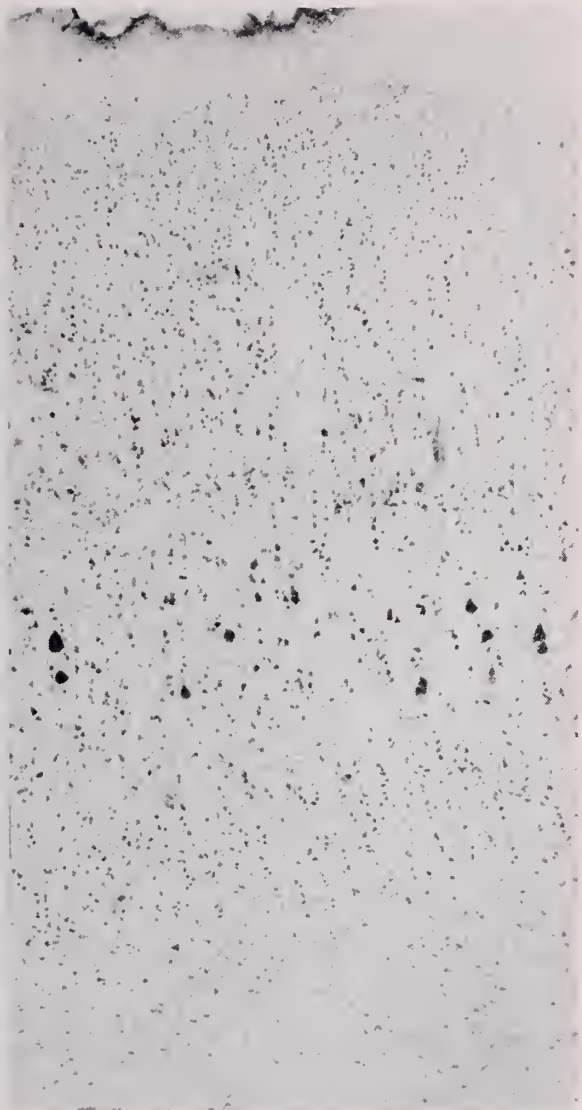
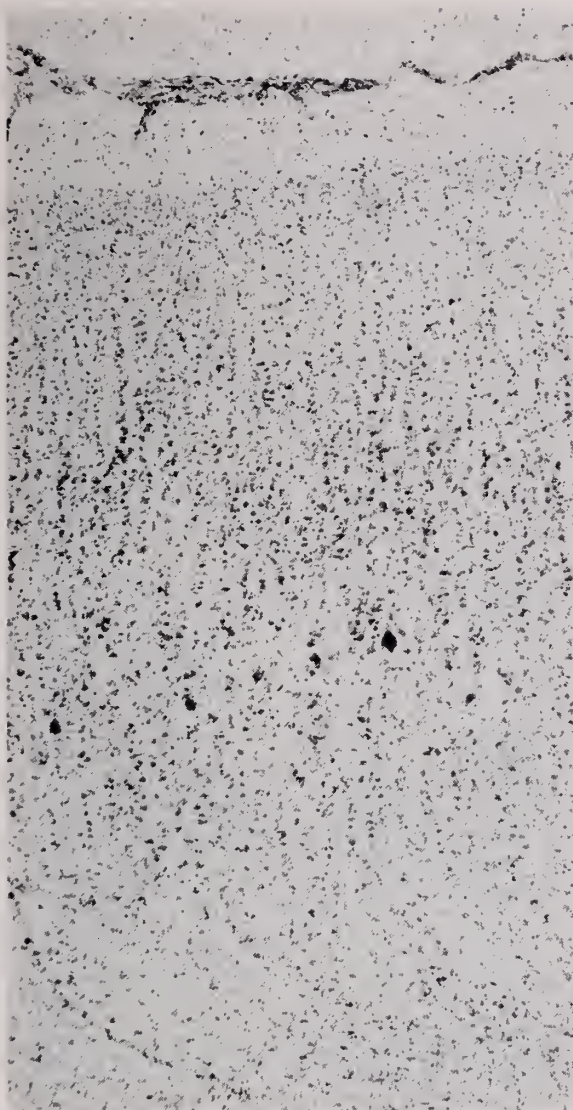


Fig. 3A Motor cortex (area 4 of Brodman). The R.T.S. brain is on reader's left side, and the normative control is on the reader's right side of the illus-

tration. Note the greater cell packing density and smaller neuronal size in the R.T.S. brain. Cresyl violet stain. X33.

containing both cerebral hemispheres were cut and stained at the E. E. Southard Research Laboratory. The same protocols used for processing the whole brain serial sections of their normative cerebra was employed (Vakovlev, 1970).⁹ These large whole brain sections were cut on a Mico Giant Microtome (Mico Instrument Company, Cambridge, Massachusetts) set at a cutting thickness of 35 microns. Although the cutting thickness remained constant, the sections varied in thickness. For analysis of nerve cell packing densities, sections of comparable thickness were needed. These sections were selected by noting the micrometer setting on the fine adjustment of the microscope when the top and then the bottom of the section

were in focus at a magnification of 400X using a 40X oil immersion objective (N.A. of 0.85).

The abnormalities noted in the R.T.S. brain were most readily seen when the large whole brain celloidin sections were compared with similar sections from normative controls of approximately the same age. The control brain selected for the illustrations (Std. 11A) weighed 1,200 grams at autopsy and is from a 32-year-old female who showed no clinical or pathological evidence of central nervous system disease. This was the closest age- and weight-matched control in the collections.

In the cerebral cortex of the R.T.S. brain, the general architecture in all areas was preserved

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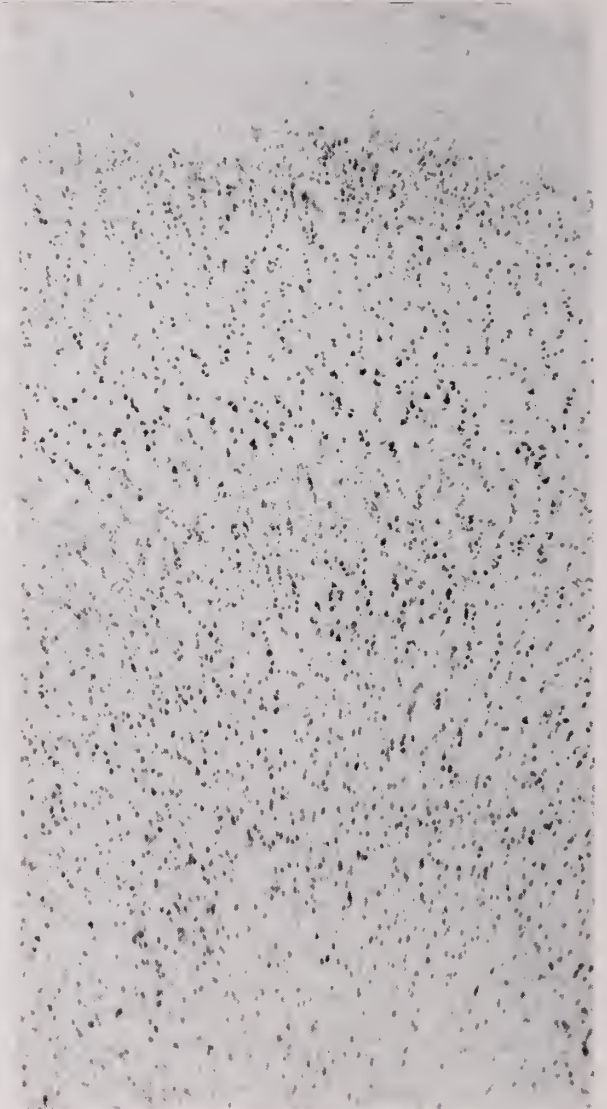


Fig. 3B. Tip of the temporal lobe (area 38 of Brodman). The R.T.S. brain is on the reader's left side, and the normative control brain is on the reader's right side of the illustration. The greater

cell packing density of small neuronal size in the R.T.S. brain is particularly prominent in layer III. Cresyl violet stain. X33.

and the cortical layers readily recognized. However, the demarcation between the cortex and the subcortical white matter in the R.T.S. cerebrum was more gradual than that of the control brain. The individual cortical neurons tended to be slightly smaller, but the cell shape, relative amount of cytoplasm, and distribution of Nissl granules closely resembled that of the normative controls. The most striking finding was an increased cell packing density in all cortical areas, which was documented by comparing photomicrographs made at the same magnification of five different cortical areas in the R.T.S. brain and the normative control. The areas selected were area 4 (heterotypical agranular cortex from a primary cortical analyzer,

motor cortex), area 24 (heterotypical agranular limbic cortex of the anterior cingulate gyrus); area 23 (heterotypical granular limbic cortex of the posterior cingulate gyrus); area 7 (homotypical cortex of the superior parietal lobule); and area 38 (homotypical cortex of the tip of the temporal lobe). Two of these pairs of photomicrographs are shown in Fig. 3A and Fig. 3B. Comparison of these histologic sections with other normative cerebra of different ages in the collections of the E. E. Southard Laboratory indicated that the R.T.S. brain showed a cell packing density intermediate between that found in the cerebra of a normative one-year-old and a normative three-year-old child.

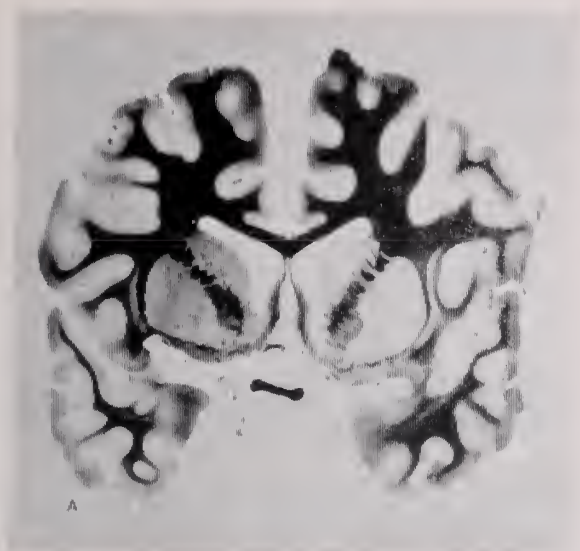


Fig. 4A. Myelin stained section at the level of the head of the caudate nucleus from the R.T.S. brain. Note the thin corpus callosum, hypoplasia of the corona radiata in the frontal lobes, and abnormal ventricular shape.

The white matter of the cerebral hemispheres of R.T.S. brain was reduced in amount as compared to that of the normative cerebrum of the same age. This deficit was particularly conspicuous in the frontal lobes and involved primarily the fiber systems of the corona radiata (Fig. 4A). The body of the corpus callosum was thinner than that noted in a comparable age-matched brain (Fig. 4B) and was foreshortened in its anterior-posterior extent. Both the rostrum and splenium of the corpus callosum had failed to develop. Caudally the corpus callosum was thin, and callosal fibers failed to reach the level of the posterior pole of the pulvinar. Instead, at this level some of these fibers turned posteriorly and formed a longitudinal callosal fasciculus of Probst¹⁰ (Fig. 4D). The fimbria and fornix were well developed, and the bodies and columns of the fornices were widely separated. The hippocampal commissure could not be located. The anterior commissure was small. The cavum septi pellucidi was open ventrally (Fig. 4C).

The anterior horns of the lateral ventricles were slit-like with their lateral angles rounded and slanted upwards. The dorsal part of the collateral trigones were mildly pointed and turned dorso-laterally (Fig. 4D). The inferior horns appeared to be slightly enlarged, and the occipital horns extended deep into the occipital lobes.

The tinctorial density of myelin staining of the fiber systems of the forebrain, brain stem, and

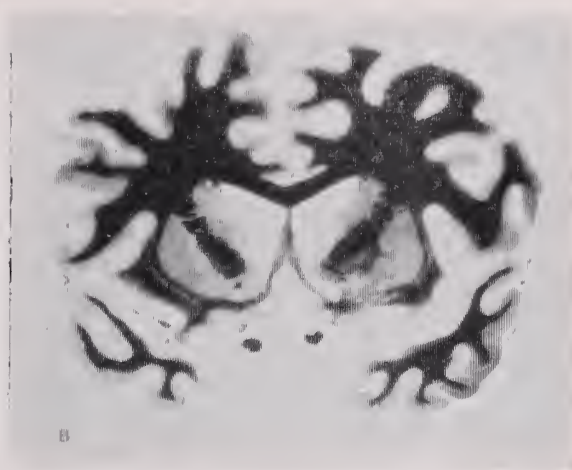


Fig. 4B. Myelin stained section from a normative control brain. Compare with Fig. 4A.

cerebellum was comparable to that of age-matched controls. There was no evidence of heterotopias, abnormal gliosis, or inflammation in any of the histologic sections.

DISCUSSION

The neuropathologic findings in the present case, taken together with those reported in the literature,^{4, 6-8} indicate that a common feature of the R.T.S. appears to be the curtailment of the forebrain development. In agreement with this is the frequent clinical finding of small head size. Rubinstein and Taybi³ reported that in 93 out of 96 cases the head circumference was below the 50th percentile and in 54 of these cases was at or below the third percentile. At autopsy an abnormally low brain weight for age was found by Coffin⁴ and in the present patient. In the case reported from Japan, although the head circumference was small, the brain weight was greater than that expected for age. This disparity might be attributable to cerebral edema. This curtailment of forebrain development appears to affect specific cortical areas disproportionately. Coffin⁴ reported foreshortening of the frontal lobes in his cases. In the present case the frontal lobes were also found to be underdeveloped as was the parietal-occipital region.

The neuropathologic descriptions of the three previously reported cases and of the present case all provided evidence of curtailment of the normal development of the cortical plate. Coffin⁴ reported poor differentiation of the cortical layers and small, immature spindle-shaped cortical neurons, with scant cytoplasm. True and Rubinstein⁵ described "excessive", randomly distributed cortical neurons

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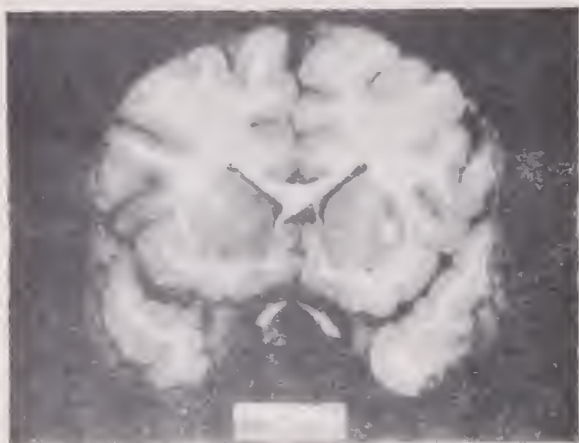


Fig. 4C. Coronal section from the gross specimen. Arrow indicates missing rostrum of the corpus callosum and ventrally open cavum septi pellucidi.

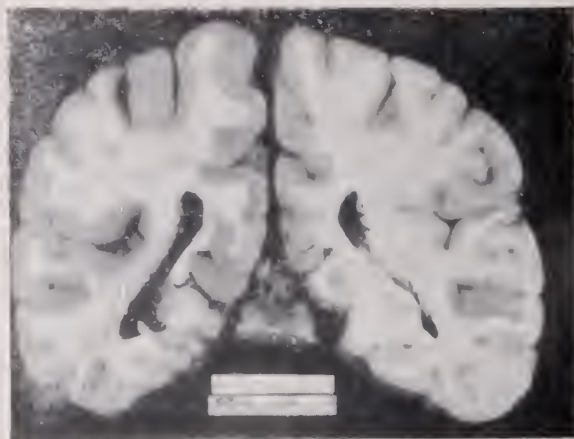


Fig. 4D. Coronal section from the gross specimen. Note absence of the splenium of the corpus callosum and the Probst bundle (arrow).

having either rounded contours or a small pyramidal shape and scant cytoplasm with no Nissl substance. In the case reported from Japan, the cortical layers were not well differentiated, and most of the cortical neurons were small and poor in cytoplasm.^{6,7} In the present case there was increased cell packing density and reduction in the size of the cortical neurons.

The most conspicuous abnormality in the case reported here was curtailment of development of the corona radiata, corpus callosum, and anterior commissure. Coffin⁴ also noted a similar decreased amount of central white matter and partial agenesis of the corpus callosum. In all other case reports with neuropathological descriptions only abnormalities in the development of the corpus callosum have been described. True and Rubinstein⁵ noted complete absence of the corpus callosum, and in the case of Oako, *et al.*,⁶ and Fukanaga, *et al.*,⁷ the corpus callosum was only one millimeter thick. Neuhauser¹¹ reported that two out of three patients demonstrated radiologic evidence of partial agenesis, and Lamy, *et al.*,¹² reported a patient in whom air study revealed findings consistent with a diagnosis of agenesis of the corpus callosum. Several patients with R.T.S., however, are known to have had normal pneumoencephalograms.^{2,3} It thus appears that curtailment of development of the corpus callosum was a frequent finding in the R.T.S. since, according to Freytag and Lindenberg¹³ it was found in only 2.2 per cent of 359 unselected autopsies from a hospital for the mentally retarded.

In the present case the ventrally open cavum septi pellucidi was associated with absence of de-

velopment of the rostrum of the corpus callosum. This finding is in accord with the studies of Zuckerkandl¹⁴ and of Rakic and Yakovlev¹⁵ on the relationship between the embryologic development of the cavum septi and the development of the corpus callosum. These authors maintain that the cavum septi is formed by the infolding of the lamina reuniens of His into the median groove, followed by the bridging over of this groove by the development of the massa commissuralis through which the callosal fibers eventually cross. The cavum septi thus formed is, at first, open into the interhemispheric fissure. With subsequent development of the rostrum of corpus callosum, the pocket becomes sealed off and forms a closed cavum.

In the present case, a 33-year-old man, myelination was normal; however, in an 18-month-old child reported by True and Rubinstein⁵ and in the 45-day-old infant reported from Japan^{6,7} myelination appeared to have been retarded. These findings suggest that myelination may be delayed but not deficient in the R.T.S.

The neuropathologic findings in the present case are in close agreement with those reported in the literature. The data indicate that in the R.T.S. a retardation of normal brain development has occurred. The most severe curtailment was in the growth and development of the frontal lobes, the parietal-occipital region, and the intercortical association and commissural fiber systems. Less affected was the differentiation of the cerebral cortex. Myelination was possibly only delayed.

SUMMARY

The neuropathologic findings in a 33-year-old mentally retarded man with R.T.S. are presented.

The forebrain was smaller than normal with hypoplasia of the frontal lobes and parietal-occipital regions. The histologic sections revealed curtailment of development of the corona radiata, corpus callosum, and anterior commissure and an abnormally increased nerve cell packing density in all cerebral cortical areas. These findings are consistent with those reported in the literature and suggest that in the R.T.S. there is a widespread curtailment of normal development of the forebrain. A particularly characteristic feature of brain in this syndrome is the frequent occurrence of partial or complete agenesis of the corpus callosum.

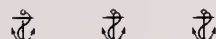
Acknowledgments: We are pleased to thank Dr. Leroy Falkenburg for the general pathological findings, Mrs. Eva Medeiros for technical assistance and Mrs. Helen Sorenson for secretarial help.

REFERENCES

- ¹Rubinstein JH, Taybi H: Broad thumbs and toes and facial abnormalities. A possible mental retardation syndrome. *Am J Dis Child* 105:588-60 June 63
- ²Rubinstein JH: Broad thumb-hallux syndrome. Free Paper Session 14. In Swoboda W, Stur O, editors: *Proceedings of the 13th International Congress of Paediatrics*, Vienna, Austria, August 29-September 4, 1971. Vienna, Verlag der Wiener Medizinischen Akademie, 1971. Pp. 471-6
- ³Rubinstein JH: The broad thumbs syndrome—progress report 1968. *Birth Defects Original Articles Series* 5:25-41, Feb 69
- ⁴Coffin GS: Brachydactyly, peculiar facies and mental retardation. *Am J Dis Child* 108:351-9, Oct 64
- ⁵True CW, Rubinstein JH: Pathological findings in a case of Rubinstein-Taybi syndrome. Symposium No. 10, the Rubinstein-Taybi syndrome. In *Proceedings of the 1st Congress of the International Association for the Scientific Study of Mental Deficiency*, Montpellier, France, September 12-20, 1967. Amsterdam, New York, Excerpta Medica Foundation, (1967)
- ⁶Aoki T, Komiya K, Ebihara Y: Broad thumbs and toes, facial abnormalities, and cerebral dysgenesis: Rubinstein-Taybi syndrome. *Jap Jour Ped* 21:327-30, 1968
- ⁷Fukunaga N, Suda S, Ebihara Y, et al.: Rubinstein-Taybi's syndrome—a case report. *Acta Path Jap* 19:501-10, Nov 69
- ⁸Minckler TM, Boyd E: Physical growth of the nervous system and its coverings. In Minckler J, editor: *Pathology of the Nervous System*. New York, McGraw-Hill, 1968. P. 120
- ⁹Yakovlev PI: Whole brain serial histological sections. In Tedeschi CG, editor: *Neuropathology: Methods and Diagnosis*. Section 1: Morphological study of the nervous tissues by special methods. Boston, Little, Brown and Company, 1970. Pp. 371-8
- ¹⁰Probst M: Über den Bau des vollständigen balkenlosen Grosshirns sowie ueber Mikrogyrie und Heterotopie der grauen Substanz. *Arch f Psychiat* 34:709-86, 1901

- ¹¹Neuhauser G: Pneumoencephalographic findings in the Rubinstein-Taybi syndrome. In Symposium No. 10—see citation No. 5
- ¹²Lamy M, Jammot ML, Ajjan N, et al.: Le syndrome de Rubinstein-Taybi. *Arch Fr Pediat* 24: 472, Apr 67
- ¹³Freytag E, Lindenberg R: Neuropathologic findings in patients of a hospital for the mentally deficient. A survey of 359 cases. *Johns Hopkins Med J* 121: 379-92, Dec 67
- ¹⁴Zuckerkindl E: Zur Entwicklung des Balkens und des Gewolbes. *Sitzber d. k. Akad Wissenach, Math-naturw. Classe*, Wien 110:233-307, 1901
- ¹⁵Rakic K, Yakovlev PI: Development of the corpus callosum and cavum septi in man. *J Comp Neurol* 132:45-72, Jan 68

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ONE SENTENCE ESSAY

Problems are not solved by throwing money at them.

. . . Richard M. Nixon.



ONE SENTENCE ESSAY

No man ever went broke underestimating the taste of the American people.

. . . H. L. Mencken.



ONE SENTENCE ESSAY

The right to the preservation of health is inalienable.

. . . William Lyman, member of Congress from Massachusetts, 1796.

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INDUSTRIAL AND WHOLESALE
FUEL OILS

TERMINATION OF BLUE CROSS-BLUE SHIELD BENEFITS

Physicians have long recognized the serious problems created by the loss of Blue Cross-Blue Shield benefits upon termination of employment due to the closing of a business or the laying off of employees in times of unemployment. At the urging of the Rhode Island Medical Society, Blue Shield and Blue Cross staff explored the feasibility of devising some method of continuing coverage through a lay-away increment to the premium or some other pool mechanism. It was concluded that past experience had demonstrated the serious actuarial difficulties of setting a rate for the continued coverage because of the lability of employment in general and more specifically in the Rhode Island area. Experiments with this type of coverage had been mostly discouraging, if not downright disastrous. Some observers, according to Sidney Cobb, an authority in this field, have concluded that employees when thrown out of work will often adopt the sick role in preference to that of the unemployed. The closing of the Studebaker plant in South Bend, Indiana is a classical example. Continued health insurance had been provided as a severance benefit. Claims after the closing rose to such astronomical levels that the corporation attempted to limit the payments until pressured into meeting its vastly underestimated commitments.

Sidney Cobb, M.D., who is director of the Survey Research Center of the Institute for Social Research at the University of Michigan, has been studying the effects of termination of employment on the health of workers. He has demonstrated, for example, changes in the uric acid and cholesterol levels affected variously by anticipated and actual loss of employment. There is in general in such situations a deteriorating effect upon the health of the workers, many of whom are "too old to work, too young to retire".

The need for continuing health insurance during periods of unemployment has recently been emphasized in a newspaper column by financial writer Sylvia Porter. Her suggestion for combining health insurance coverage with unemployment compensation was inspired by the book "Termination: The Closing at Baker Plant", written by author Alfred Slote, based on the studies of Sidney Cobb and Slote's own investigations into the fate of employees of the plant. Cobb, a friend and neighbor of Slote in Michigan, thinks highly of the book and cooperated in its formulation. "Baker", a fictitious name, a Detroit automotive paint division

of "Pennsylvania Corporation" (probably Pittsburgh Plate Glass), was the object of an intensive prospective study by Cobb.

Cobb supports, in addition to the continuation of health coverage, the principle of the portable pension or of some change in social security whereby older men whose jobs are terminated do not lose their retirement benefits.

In his foreword to the Slote book Cobb states: "I believe that the closing of a factory should be considered a social emergency and that community resources should be mobilized to provide help to the . . . disadvantaged groups before they become unemployed, not after they have been unemployed for some months".

Cobb urges that a company should be required by law to continue health insurance benefits for at least six months after a closing, or until the employee is reemployed under circumstances providing coverage. This is not precisely the same as providing health insurance as part of unemployment compensation, but is another way of accomplishing a similar objective.

National Health Insurance as envisioned by its more moderate proponents would be a benefit supported by a tax contributed to by both employer and employee, as is unemployment compensation insurance. It is a practical and logical step to have hospital and physician coverage continue after termination of employment as a part of unemployment compensation. Under present law the period would be six months. Coverage for the unemployed or dependent would be an insurance benefit provided by the federal government, or by the local government with federal support. Those over age 65 are already accounted for.

It is time that the continued medical care of those who have lost employment be deemed a proper joint responsibility of the employer, the Federal and state governments, and the community. Blue Cross and Blue Shield are fully ready to provide the benefits when the community assumes its rightful responsibility.

REFERENCES

- ¹Cobb, Sidney, et al.: The health of people changing jobs: A description of a longitudinal study. *Am J Pub Health* 56:1476, Sept 1966
- ²Kasl, S; Cobb, Sidney, and Brooks, GW: Changes in serum uric acid and cholesterol levels in men undergoing job loss. *JAMA* 206:1500, Nov 11, 1968
- ³Slote, Alfred: Termination: the Closing at Baker Plant. The Bobbs-Merrill Company. Indianapolis/New York, 1969

MODEL CITIES SURVIVAL

Model Cities was created by the Demonstration Cities and Metropolitan Development Act of 1966, Title I as amended, Public Law 89-754.

A Model Cities program has been in operation in the city of Providence, Rhode Island for about two-and-one-half years. Model Cities supplementary grants are unique in that they are Federal money which can be matched with other Federal money as the local share of the Federal grant in aid program. Model Cities is a planning agency rather than an agency to do the actual work. It attempts to put money into areas where the need is greatest. Thus Model Cities is really an umbrella agency whose purpose is to try to coordinate the many programs already in existence in other agencies, select through its own management areas of need, and contract with other providers of service for each identified project. It is the Model Cities' responsibility, in addition to providing funds for the project under contract, to make certain that the goals contracted for are achieved and that the people for whom they are designed are truly served. For example, Model Cities may contract with an HMO or a medical practice group to provide services for Model Cities residents.

Model Cities was conceived as the coordinating arm of the Federal government, deals with a specific geographic area encompassing all ranges of income, and usually is limited to 10 per cent of the population. In any area it is a direct extension of the Mayor's office and works with a Citizens' Advisory Council.

In 1967 Providence chose for its Model Cities site an area in South Providence of one-and-one-half square miles with a population of about 18,000 (Providence population 180,000) of whom approximately 40 per cent are black. Two-and-one-half million dollars have been budgeted each year for a total of 11 million dollars after five years of operation.

Model Cities has attempted to play several roles in Providence. First, attitudes of the people served must be changed from a defeatist live-for-today philosophy to an expectant hopeful philosophy of better living for tomorrow. Model Cities has tried to be honest at all times, teaching accountability and attempting to involve as many citizens as possible. The timing of the citizens' involvement has not always been the best possible. It is important to have them involved as soon as an idea

is germinated. Confrontation is important. Further, ghetto residents have a cynicism which pervades their attitudes.

Status for people means many things. For poor people it seems to be a home of their own and yard space. Housing for poor people has been of prime importance during the past two years. Project and high rise housing for the poor has not worked. Model Cities in Providence has tried to provide single family home ownership for the poor. Providence housing is old and obsolete. The past two years have been devoted to tooling up with the tearing down of much of the unusable housing in the Model Cities area. Eleven new homes have been completed, and over 2,000 single family dwellings will be constructed in the next 10 years. Poor people will be given a subsidy of up to \$5,000 with a discounted one per cent interest mortgage.

Home ownership counseling courses are to be provided. Hopefully, greater incentive, accountability, and pride, and better home maintenance will be developed and reverse the deterioration that has been rampant up to now.

One of the greatest challenges facing Providence, as well as any city and particularly any Model City area, is urban renewal. Providence is sufficiently small for all to work together and solve problems. The Weybosset Hill project of Mayor Joseph A. Doorley, Jr. is an attempt to rejuvenate the entire downtown area. Most of the renewal activity in the Model City area is neighborhood initiated. Much of the demolition work has already occurred. Several locations are now ready for rebuilding. One hundred to 150 single family houses will be constructed shortly in the 16-acre Lockwood Street section adjacent to the Rhode Island Hospital. It is anticipated that the city will acquire a 2½-acre site from the Rhode Island Hospital for a 250-unit complex for the elderly and handicapped. Under an innovative plan this unit will be hospital serviced on an ambulatory basis and at the same time provide housing. The residents may well receive their laundry and food services from Rhode Island Hospital, and some of their medical care from the physicians based at the hospital. Additional and similar housing programs are ready to be implemented in Upper South Providence (Comstock Avenue area) and Lower South Providence (Oxford Street to Beacon Avenue). Over one million

dollars will be used to modernize the Roger Williams Housing Project and to reduce the number of units from 750 to a more manageable 350. Within five years all of South Providence should be an economical esthetic place to live.

While housing has been a prime consideration for Model Cities, education has not been neglected. Some \$600,000 was used to design in cooperation with the Providence School Department remedial reading programs to assist the children in upgrading their level of reading. The Model Cities schools will use this reading curriculum. Recreation programs, best friend clubs, community protection officers because of the security problem, a credit union, and day care and health centers are helping the neighborhood residents. On Mystic Street a combination special Service Center serves as a shopping area for the residents, with access to a variety of agencies with offices under one roof. Agencies and clients are brought together without an endless bureaucracy physically hindering them from obtaining answers to their problems.

THE MEDICAL SOCIETY AND ALLIED HEALTH TRAINING

The Rhode Island Medical Society devoted its Annual Scientific Assembly in 1971 to a discussion of Allied Health Training, exploring such matters as the Medex program at Dartmouth College, the Physician's Assistant Program at Duke University, and the present scope of paramedical training programs in Rhode Island. In his able discussion of the latter subject Doctor Heber Youngken, Dean of the College of Pharmacy at the University of Rhode Island, recommended the creation of an Area Health Science Education Center. Thus, out of the Society's meeting came the stimulation for the chartering of the new Rhode Island Health Science Education Council, comprised of a broad consortium of health care agencies to develop a unified health manpower training system for the state.

Early Medical Society involvement increased significantly when this new concept was reviewed by its Allied Health Professions and Services Committee, led by Doctor George F. Meissner. The committee endorsed in principle this innovative agency and urged that the Medical Society participate actively in development of such a center. In a companion matter, the committee also urged the House of Delegates of the Rhode Island Medical Society to request a moratorium on licensure of any additional health occupations in Rhode Island until long range solutions are developed. The Rhode

Model Cities, directed by Richard Torchia, is a viable program. But will it be permitted to carry out its original mandate? Model Cities funds with or without federal money may be used to purchase services from or contract for existing services with vendors for the provision of health and social services to the residents in the Model Cities area. Any service provider wishing to deliver services to Model Cities residents is encouraged to present a proposal to the local Model Cities administration.

When the federal government passed the Model Cities bill it was intended to place all of the federal categorical programs in the towns, cities, and states under one umbrella, encompassing the varied ethnic and social groups. The original intent of the law has failed. It is not too late for all of those who have an interest in these programs to take one last hard look at the original intent of the law, to make a reassessment, and to attempt to rejuvenate them. Perhaps with a determined and intelligent effort they can still be made to work smoothly.

Island Medical Society thus became one of seven incorporators of RIHSEC, together with the Hospital Association of Rhode Island, the Board of Regents, the Rhode Island State Nurses Association, Brown University, the Consumers Council, and the Tri-State Regional Medical Program.

It has been announced that Edward Berg, Ph.D., former director of allied health professions and professor of biology at California State University, Fresno, California, has been named executive director of the Council. At a recent meeting of the Continuing Medical Education Committee of the Society, Doctor Berg explained the background, purposes, and goals of the organization in attempting to systematize the education and training of those working in the health field. As he described them, Doctor Berg's tasks will indeed be formidable — but not insurmountable. The program has been funded by a three year grant of \$594,000 from the Tri-State Regional Medical Program. With this fiscal buttress and the cooperation and good will of the various agencies, the new consortium can make a substantial contribution to the clarification and implementation of allied health manpower training programs in Rhode Island. The Medical Society is proud of its leading role in the development of the Rhode Island Health Sciences Education Council and wishes every success to Doctor Berg in his new position of leadership.

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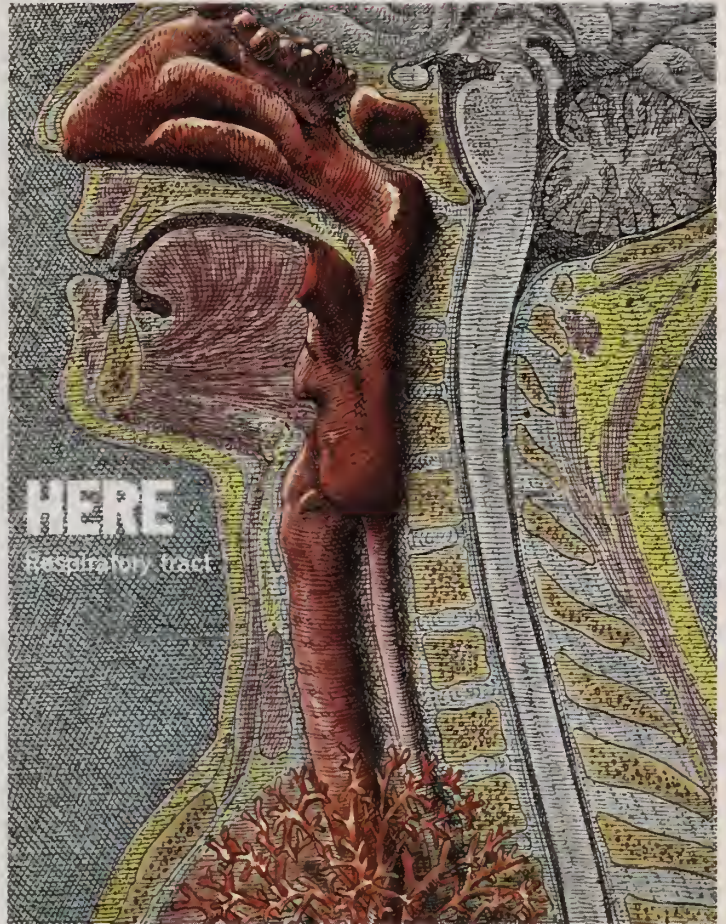
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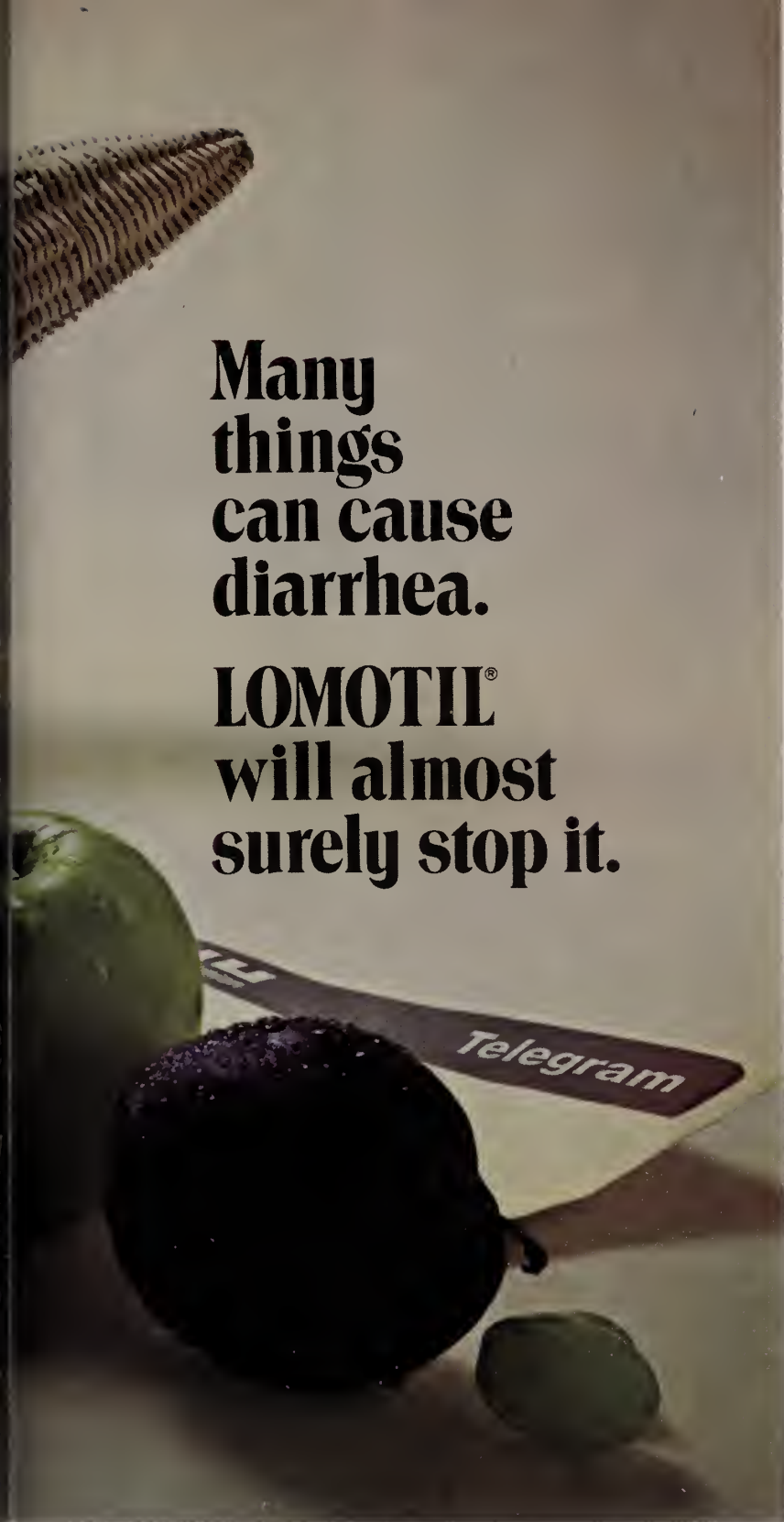
Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

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breast milk of nursing mothers.

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Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

nausea, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Contraindications and administration: Lomotil is contraindicated in children less than 2 years old. Use only liquid for children 2 to 12 years old. For 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Warnings: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hyporeflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur

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Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

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Peripatetics

WILLIAM A. REID has been appointed medical director of the Rhode Island Group Health Association. Doctor Reid replaces MARTIN POSNER who has become director of community medicine and ambulatory services at Miseracordia Hospital in the Bronx and a professor at the New York Medical College.

* * *

ROBERT P. DAVIS, Chief of Medicine, The Miriam Hospital, was named secretary of a legislative commission that will study the possibility of state financial assistance for a kidney treatment program, including the possible purchase of two kidney machines.

* * *

IRVING T. GILSON, Chief of Medicine at St. Joseph's Hospital, has been appointed a Clinical Instructor in Medicine at Brown University.

* * *

HENRY IZEMAN, representing the Providence Medical Association, was elected to serve on the Board of Directors of the Home Care Association of Greater Providence, Inc. to coordinate home care for patients discharged from five hospitals in the metropolitan area.

* * *

J. D. KEITH PALMER, Director of Physical Rehabilitation Medicine, has been appointed to the Steering Committee of the New England Cord Injury System. He will also serve on the Evaluation of Services Committee.

* * *

MAURICE W. LAUFER, director of the Emma Pendleton Bradley Hospital in East Providence has been appointed Clinical Professor of Psychiatry on the faculty of Brown University's Division of Biological and Medical Science.

* * *

ROBERT V. LEWIS, immediate past president of the Medical Society, has been nominated to be President-Elect of the Council of the New England Medical Societies.

HENRY S. M. UHL, Chairman of the Society's Committee on Continuing Medical Education, has been elected a member of the Rhode Island Advisory Committee of the Tri-State Regional Medical Program for a two-year term.

* * *

RICHARD E. LAND, associate radiologist and director of Radiologic Education at Massachusetts General Hospital, has been named Chief of Radiology at St. Joseph's Hospital.

* * *

SEEBERT J. GOLDOWSKY, Editor-in-Chief of this JOURNAL, has been elected to a five-year term on the Advisory Committee of the State Medical Journal Advertising Bureau, beginning January, 1973.

* * *

CONSTANTINE S. GEORAS has been granted Fellowship in the American College of Cardiology (ACC), the national medical society for specialists in cardiovascular diseases. The announcement was made by F. A. SIMEONE, ACC Governor for Rhode Island.

* * *

LOUIS A. LEONE has been elected President of the staff association of Rhode Island Hospital; ROBERT V. LEWIS was named President-elect; HERBERT FANGER, Vice President; THOMAS McOSKER, Treasurer. WARREN W. FRANCIS was elected to a two-year term on the executive committee.

Named to the active staff were JOSEPH D. AKERS, anesthesiology; NORBERTO G. CONCEPCION, anesthesiology; NALINKANT A. PATEL, anesthesiology; ROBERT S. POTASH, anesthesiology; M. PATRICIA FARNES, medicine; and CARL F. ROSENBLOOM, pediatrics.

ALBERT J. LAURENZO was named to the courtesy staff in medicine; and George S. Hambly to the surgical courtesy staff.

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Members are urged to notify the executive office of items of professional or personal interest for publication in this column.

District County Medical Society

WASHINGTON COUNTY MEDICAL SOCIETY

The quarterly meeting of the Washington County Medical Society was held at the Elm Tree Inn, Westerly, R. I., on October 11, 1972.

The meeting was called to order at 11:30 a.m. by Dr. Gregory Burbelo, President. Members present were Doctors Agnelli, Burbelo, Capalbo, Falconer, Gale, L. Johnson, Rosenfield, Ruisi, Tang, J. Wood, and P. Wood.

It was moved by Doctor Sylvester Capalbo and seconded by Doctor Alfred Potter that the minutes of the last regular meeting be accepted as printed and distributed.

COMMUNICATIONS

Several communications were read to the group.

COMMITTEE REPORTS

Doctor F. Bruno Agnelli reported on the activities of the Council. Doctor William H. McDermott asked of the Society's bank account could be moved to the Industrial National Bank so that it would be more convenient for him to make deposits. Doctor Joseph L. Ruisi moved and seconded by Doctor Capalbo that the account be moved from the Washington Park Trust Bank to the Industrial Bank. This was approved by the body.

OLD BUSINESS

Doctor Palaia distributed copies of a new By-laws and Constitution. Doctor Ruisi moved that

they be put on the agenda for the next meeting, when they will be discussed in detail.

NEW BUSINESS

The nominating committee of Doctors Mangano, Capalbo, Agnelli and Ruisi were appointed by the President.

Doctor Ruisi brought up the cost of Blue Cross to Rhode Island physicians through the Medical Society's Group Plan. Why is it so high?

Doctor Pinto moved that a letter be sent to the Rhode Island Medical Society, asking if an explanation can be given why the doctors as a group are placed in such a category and why it is so much more expensive than other group plans?

Dr. Albert Laurenzo and Dr. Judith Eaton were approved as transfer members from the Providence Medical Association, and the applications of Doctor Musselman and Doctor Spens were approved as new members.

The meeting was adjourned at 12:30 p.m. after which Dr. John Cunningham, Chairman of RIMPAC and Mr. William Baltaks from the AMA presented the RIMPAC program to the Society.

Respectfully submitted:

FRANCIS M. PALAIA, M.D.
Secretary

✍ ✍ ✍

Editor's Mailbox

Gentlemen:

Congratulations on the excellent article appearing in the December issue of the RHODE ISLAND MEDICAL JOURNAL. Your insight into the shortcomings of the Federal Medicare Program, as it applies to nursing homes, is indeed candid and honest.

As it now stands, in my opinion, the Federal Medicare Program which applies to nursing homes is a hoax on the American people and is a virtually defunct program.

More extended care beds are needed in Rhode Island, and to my knowledge there are approximately 2,000 proprietary beds on the drawing

boards in this State. When these beds are completed and in operation they will go a long way towards filling the needs for extended care beds at reasonable prices.

I agree with your editorial which stated that the matter is urgent and critical, and the time is here to motivate our leaders and the general public about the dire need for properly financing extended care beds.

Very truly yours,

Theodore F. DiStefano

President, Allen Health Center

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HOUSE OF DELEGATES REPORT

(Continued from page 98)

the Society, attended a meeting of the American Medical Association's Committee on Emergency Medical Services in Framingham, Massachusetts. The meeting was attended by delegates of the six New England states who discussed the progress that each state had made on emergency medical services. During the discussion, Doctor Conrad outlined the progress of his committee in establishing the Emergency Medical Technician course and its unparalleled success. He also outlined the participation of community representatives in the Citizens' Advisory Committee on Emergency Medical Services.

During a question period, Dr. Roy Baker, of Jacksonville, Florida, a member of the Committee, expressed the view that there is an indefinable point where a committee should transfer emergency medical services from volunteer rescue squad workers in the community to full-time people with a concomitant upgrading of training and education. Doctor Farquhar outlined the benefits of the AMA to emergency medical service:

1. It drafted model bills for specific states.
2. It consulted with various states when consultation was sought.

3. It worked with the Congress on Emergency Medical Service legislation.
4. It established a conference with the American Hospital Association on emergency service in the accident room.
5. It worked in association with other agencies to establish a national registry for emergency medical technicians, including national tests.
6. It initiated emergency medical service councils wherever possible.
7. It sponsored with the Jaycees a conference for group planning on emergency medical service.
8. It helped plan an insurance carrier symposium to be held November 29 and 30, 1972 in Phoenix, Arizona, with the emphasis on cost and the benefits of emergency medical service for communities for approximately 150 corporation executives.

Emergency Medical Services Committee Meeting in Marlboro

The first New England conference on Emergency Medical Services, conducted by the Division of Emergency Health Services, Health Services and Mental Health Administration of the Department

(Continued on Next Page)



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MEDICAL BUREAU
of the
Providence Medical Association

of Health, Education and Welfare, was held in June in Marlboro, Massachusetts. Representatives from the six New England states attended the meeting including a significant delegation from public and private agencies in Rhode Island. Several Rhode Island representatives participated as a member of one of the panels. The conference was divided into several areas of discussion including legislation, training, communications, emergency medical service advisory councils, and the operation of emergency medical departments. Doctor Conrad served as moderator for the session concerning emergency department operations. Of particular interest was a discussion of the electrographic telemetry system in Hartford, Connecticut described by Dr. Robert J. Huszar, Director of Research at St. Francis Hospital in that city. The Hartford Cardiac Alert project was interesting, since the Rhode Island Department of Health, Division of Emergency Medical Service, and the Citizens' Advisory Committee on Emergency Medical Services, in conjunction with the Society, are attempting to establish an electrographic telemetry system pilot program at the Kent County Memorial Hospital in Warwick. Mounting of this program, however, rests largely on the funding of the plan through the Tri-State Regional Medical Program, which has received federal funds to create an emergency medical service system in New Hampshire, Massachusetts and Rhode Island. The electrographic telemetry system in Rhode Island would involve six rescue vehicles tied into the Kent County Memorial Hospital in Warwick.

Of particular importance was the federal emphasis placed on the requirement of an 81-hour emergency medical technician course.

Tri-State Regional Funds

The Tri-State Regional Medical Program Medical Care and Education Foundation for Massachusetts, New Hampshire and Rhode Island filed an

application on April 15, 1972 to develop an emergency medical services system in those three states. The program for two of the three years has been funded in its entirety or \$847,025 in the first year, and \$869,965 in the second year. The Federal Government has told Tri-State that it would guarantee funding for the third year but the amount has not yet, as far as we can determine, been made specific. After numerous meetings with members of the Rhode Island Department of Health, The Hospital Association of Rhode Island, the Health Planning Council, R. I. Health Services Research, Inc. (Search), and members of the Tri-State Regional Medical Program, it was decided that Search should assume the role of fiscal agent in Rhode Island for emergency medical services funding. A state-wide emergency medical services plan has been prepared by the Department of Health and has been submitted to Tri-State. The plan calls for funding of \$68,975 in the first fiscal year for Rhode Island.

Emergency Medical Technician Course

At a recent meeting of the various public and private agencies involved in the training of emergency medical technicians, it was agreed that the present 37½ hour course should be expanded to 50 hours this Fall. Hopefully, hospitals in the state will cooperate in permitting emergency medical technicians to gain important experience and to fill the gaps in their theoretical knowledge by working in an emergency room for approximately 12½ hours during a semester in conjunction with the Emergency Medical Technician course. This course is expected to be presented in three sections in the state this Fall. The EMT classes will start in Warwick on Tuesday, September 19, 1972 on the new campus of Rhode Island Junior College, Thursday, September 28th in the Westerly area, and in Newport, Monday, October 2nd. Each class is expected to have 35 students. Presently, those students who successfully complete the EMT course are awarded a patch and a certificate. Because of the importance of reciprocity among the states for licensing Emergency Medical Technicians, a National Registry has been established in Ohio. Approximately 75 applications have been submitted to the Department of Health to take a written and practical examination on September 16, 1972. Members of the Committee supervised in the administration of this test.

The Committee is also considering a seminar

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for a physician orientation in emergency room training with funds available from the U. S. Public Health Service, and the Committee has also considered working with the American College of Emergency Physicians in seeking the assistance of emergency room physicians to locate HEAR System radios in their accident rooms so that they can communicate directly with rescue vehicles rather than going through a hospital dispatcher.

Respectfully submitted:

ROBERT L. CONRAD, M.D.

Chairman

* * *

NURSING COMMITTEE

As Chairman of the Nursing Committee, I have attended all the meetings of the Rhode Island State Nurses' Association and the meetings of the statewide community planning committee for nursing and the study of nursing education in Rhode Island. The Nursing Committee, in conjunction with representatives from the State Nurses' Association, have formed the Rhode Island Joint Practice Commission, whose task it will be to examine the roles and functions in medical and nursing practice. At a recent meeting of the Rhode Island Joint Practice Commission, the objectives and priorities of the National Joint Practice Commission were adopted as follows:

I. Examination of roles and functions in medical and nursing practice with definition of new and altered patterns.

1. Define authority, responsibility and operation of each profession and examine relationships (clarification-identification — of independent and interdependent functions of medicine and nursing).

2. Identify responsibility that nursing and medicine are willing to assume in fulfillment of health care needs.

3. Identify and discuss areas of joint practice of medicine and nursing (gray areas).

4. Examine to what extent medicine and nursing can change to meet health needs.

5. Define changes in medical and nursing practices needed to improve quality health care.

6. Define the new responsibilities of physicians and nurses and take the lead in gaining acceptance by physicians, nurses, government agencies, state, national laws and other organizations such as the Joint Commission on Accreditation of Hospitals (JCAH).

II. Definition, identification, and examination of health care needs.

1. Define affordable quality health care for the United States.
2. Identify health needs nationally and regionally, amenable to medical and/or nursing care.
3. Identify unmet health needs which have impact on medicine and nursing.
4. Identify social, educational and economic barriers which now prevent or impede quality health care.
5. Examine types of care delivery systems with identification of priorities in specific geographic areas.

III. Improve communication between medicine and nursing to enhance joint planning and action.

1. Identify ways of enhancing communication between the two professions on national, state and local levels.

2. Foster and increase working communications between the two major health care professions.

3. Determine ways to improve quality of care through joint planning.

IV. Propose changes in educational patterns

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and relationships that would enhance the new role functioning of nurses and physicians.

1. Recommend (advocate) a constant modification in the training and practice of medicine and nursing to meet present and future health needs.
 2. Examine interdisciplinary teaching programs.
 3. Study present motivation modalities that affect medical and nursing student selection of specialty.
- V. Address the traditional problems which affect nurse-physician relationships in order to establish enhanced role functioning.
1. Examine issue of male-female, class, status, and how these affect collaborative relationships.
 2. Examine the issues of male vs. female, class and status as they affect collaborative and collegial relationships in delivery of health care.
- VI. Encourage and assist in the development of state counterpart joint practice committees.
1. Outline methodology for state joint practice commissions (identify unmet health care

needs at a local level amendable to correction by nursing or medical care).

2. Aid in establishing state joint organizations and channels of communication with them.
- VII. Identify and address the ensuing problems related to basic role reorganization.
1. Identify problems that may arise because of role changes (legal usage, continuing education) and attempt to solve them.
 2. Identification and breaking down of legal barriers in the way of implementing new or altered nursing and medical roles.
 3. Provide models and demonstrations aimed at resolving present problems in practice.

Respectfully submitted:

MAURICE ADELMAN, M.D.

Chairman

* * *

COMMITTEE ON AGING

The Committee on Aging of the Rhode Island Medical Society met on Thursday, June 8, 1972 at the Cedar Crest Nursing Center. In attendance, in addition to the Chairman, Dr. Raymond Moffitt, were: Dr. Mark Yessian, a committee member, and the following invited guests: Miss Alice Gibney, representative of John Chafee, a candidate for the U. S. Senate; Mr. Frederick Creighton, President of the Golden Agers; State Senator Raymond E. Grimes; Mr. Theodore DiStefano, C.P.A., owner, Allen Nursing Home; Rev. Joseph M. Protano, Inner City; and Mrs. Madeline Ernest, LNHA, Administration, Cedar Crest Nursing Center.

The meeting was called to order at 7:30 p.m. by Doctor Moffitt who welcomed those attending and explained that they had been asked to participate due to their peculiar situations in dealing with the elderly, their problems and, in particular, as related to the health care field. It was noted that of those in attendance, state and federal officials, the Golden Agers Club, The Inner City, hospitals and nursing homes were represented.

The importance of making public officials aware of our problems was stressed. Since this is an election year, it was the general feeling that this should be done now.

Mr. Creighton feels that the elderly person requires more money to live — and still maintain a sense of dignity. It was his opinion that since the advent of Federal Medicare, the elderly have been able to receive better care and the doctors have been able to receive a reasonable amount for their services.

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Senator Grimes mentioned that one-half of all costs for welfare recipients is for medical needs. He would like to see OAA, AB, and AD recipients not grouped together in one welfare category, explaining that the budget was very nearly cut and that AB and AD many times are used as scapegoats. Public should be aware of the cost of supporting those in each category, the Senator stated.

To help lower costs, Doctor Yessian related that he directs his patients to druggists that will give them lowest prices and in addition he distributes his samples to the needy. Recommendations were for better surveillance and for doctors to direct their patients to drug stores where prices are lowest and in addition the doctor should prescribe medications that are the least expensive.

With regard to Federal Medicare, Title XVIII, it was hoped that lower co-insurance amounts would come about, that the three day hospital stay to qualify for ECF stay would be eliminated, and that direct admission of patients from home to EFC in lieu of hospitals would be made. With reference to decisions as to what constitutes "skilled care" in an EFC, it was felt that the physician, not bureaucrats, should make the decisions.

To ensure better health facilities to house the elderly, Mr. DiStefano suggested that the Health Department and licensing unit in enforcing rules and regulations should make surprise inspections, be more strict in enforcement and hopefully would tighten to a point where people would be unable to use political influence.

Father Protano showed much concern over the elderly losing their place in society having to live in nursing homes and becoming more or less "institutionalized" — what of the concept of younger patient in the same environment with the elderly. Mrs. Ernest felt that greater stress has been placed on recreational activities; those who can participate, also volunteer programs to allow for visits to lonely patients with no family, social service to determine specific needs. The idea of younger patient interrelationship with elderly was thought to be a good idea. The elderly, for the most part, seem to enjoy the young. Conversation touched briefly on multi-level concept of care — EFC to Nursing, Nursing to Convalescent, Convalescent to retirement home — all within a common boundary. All agreed this approach is by far the best.

The problem of physician visits to patients in nursing homes was brought up by Mr. DiStefano who felt there must be some way to ensure physician visits to a home on a more frequent basis. Doctor Moffitt felt that many doctors were just too busy, since it does present a problem to go to

3-5 nursing homes in addition to hospital visits, plus keeping up a private practice. He mentioned that the Federal Government allows payment for 3 visits monthly to patients in the ECF for Medicare patients unless clinical condition warrants more visits; but only one visit per month to those in the nursing home section and multiple visits at the same time are discouraged. For example: If you have 20 patients in a hospital and can see them all in one visit this would be allowed, if you have 20 patients in a nursing home you would have to make several separate visits in order to visit each one in a month's time which is time consuming and discourages physicians because of their taxing schedule in other more medically necessary areas. Physician problems reflect shortage of physicians and recommendation was for paramedical assistants.

General discussion brought forth the following: Father Protano felt that controls or guidelines should be written for a decent socializing sort of life for our patients — and for the protection of our patients. He requested also that doctor appointments for our elderly should be made early in the day since so many are afraid to venture out after dark and during the winter months later afternoon appointments make it necessary for them to leave a doctor's office when it is no longer daylight. Mr. Creighton brought out the fact that R. I. now has set up nutritional centers in various sections in the state and furnishes buses to transport people to the centers for meals. He would like to see them get money instead, but on the other hand it was the general opinion that they would actually eat when in the company of others . . . alone they might not prepare a meal. It was brought forth by Mr. Grimes that latest figures show 48 per cent of people in Providence are over the age of 55. Poverty level is now considered to be \$7,500 gross yearly income.

It was decided that this committee should plan for publicity on future meetings and felt it is necessary to meet with Sen. Clairborne Pell and Former Secretary of the Navy, Former Gov. John Chafee, to go over health problems and problems of the elderly. A letter is to be sent to both to set up separate meetings to go over issues. This was to be done as soon as possible. A reporter is to be notified to attend.

The next committee meeting is to be called the first week of October.

The meeting adjourned at approximately 10 p.m.

RAYMOND MOFFITT, M.D.

Chairman

✂ ✂ ✂

THE NITRO BLUE TETRAZOLIUM (NBT) TEST

(Concluded from page 113)

REFERENCES

- ¹Evans WH, Karnovsky ML: The biochemical basis of phagocytosis. IV. Some aspects of carbohydrate metabolism during phagocytosis. *Biochemistry* 1:159-66, Jan 62
- ²Rossi F, Zatti M: Effect of phagocytosis on the carbohydrate metabolism of polymorphonuclear leukocytes. *Biochem Biophys Acta* 121:110-9, 26 May 66
- ³Quie PG: Intraleukocyte bactericidal mechanisms. *J Pediatr* 75:532-3, Sep 69
- ⁴Klebanoff SJ: Myeloperoxidase: contribution to the microbicidal activity of intact leukocytes. *Science* 169:1095-7, SS Sep 70
- ⁵Klebanoff SJ: Intraleukocytic microbicidal defects. *Ann Rev Med* 22:39-62, 71
- ⁶Stjernholm RL, Manak RC: Carbohydrate metabolism in leukocytes. XIV. Regulation of pentose cycle activity and glycogen metabolism during phagocytosis. *J Reticuloendothel Soc* 7:550-60, Dec 70
- ⁷Strauss RR, Paul BB, Jacobs AA, et al.: Role of the phagocyte in host-parasite interactions. XXII. H_2O_2 -dependent decarboxylation and deamination by myeloperoxidase and its relationship to antimicrobial activity. *J Reticuloendothel Soc* 7:754-61, Jun 70
- ⁸Holmes B, Page AR, Good RA: Studies of the metabolic activity of leukocytes from patients with a genetic abnormality of phagocytic function. *J Clin Invest* 46:1422-32, Sep 67
- ⁹Baehner RL, Nathan DG: Quantitative nitroblue tetrazolium test in chronic granulomatous disease. *N Engl J Med* 278:971-6, 2 May 68
- ¹⁰Windhorst DB, Holmes B, Good RA: A newly defined X-linked trait in man with demonstration of the Lyon effect in carrier females. *Lancet* 1:737-9, 8 Apr 67
- ¹¹Park BH, Fikrig SM, Smithwick EM: Infection and nitroblue-tetrazolium reduction by neutrophils. *Lancet* 2:532-4, 7 Sep 68
- ¹²Feigin RD, Shackelford PG, Choi SC, et al.: Nitroblue tetrazolium dye test as an aid in the differential diagnosis of febrile disorders. *J Pediatr* 78:230-37, Feb 71
- ¹³Gifford RH, Malawista SE: The nitroblue tetrazolium reaction in human granulocytes adherent to a surface. *Yale J Biol Med* 45:119-32, Apr 72
- ¹⁴Barker BE, Farnes P: Nitroblue-tetrazolium (NBT) test—a micromethod. *Clin Res* 20:524, Apr 72
- ¹⁵Matula G, Katerson PY: Spontaneous *in vitro* reduction of nitroblue tetrazolium by neutrophils of adult patients with bacterial infection. *N Engl J Med* 285:311-17, 5 Aug 71
- ¹⁶Park BH: The use and limitations of the nitroblue tetrazolium test as a diagnostic aid. *J Pediatr* 78:376-8, Feb 71
- ¹⁷Editorial: Nitroblue tetrazolium: a routine test? *Lancet* 2:909-10, 23 Oct 71
- ¹⁸Farnes P, Povar ML, Fieschko J, Barker BE: NBT tests in dog neutrophils. *Lancet* 1:47, 1 Jan 72
- ¹⁹Cooper MR, DeChatelet LR, McCall CE, et al.: Altered phagocyte function in the myeloproliferative disorders. *Clin Res* 19:415, Apr 71
- ²⁰Park BH, Holmes BM, Rodey GE, et al.: Nitroblue-tetrazolium test in children with fatal granulomatous disease and newborn infants. *Lancet* 1:157, 18 Jan 69
- ²¹Humbert JR, Marks MI, Hathaway WE, et al.: The histochemical nitroblue tetrazolium reduction test in the differential diagnosis of acute infections. *Pediatrics* 48:259, 67 Aug 71
- ²²Park BH, Holmes B, Good RA: Metabolic activities in leukocytes of newborn infants. *J Pediatr* 76:237-41, Feb 70
- ²³Abello VB: Has the nitroblue tetrazolium test proved itself? *Pediatrics* 49:311-2, Feb 72
- ²⁴Baehner RL: Conflicting results on metabolic studies of leukocytes from patients with osteogenesis imperfecta: Notes on NBT test. *J Pediatr* 80:346-7, Feb 72
- ²⁵Miller DR, Kaplan HG: Decreased nitroblue tetrazolium dye reduction in the phagocytes of patients receiving prednisone. *Pediatrics* 45:861-5, May 70
- ²⁶Lukens JN: Hemoglobin S, the pneumococcus, and the spleen. *Am J Dis Child* 123:6-7, Jan 72

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ALPHA-FETOPROTEIN IN PATIENTS WITH BENIGN AND MALIGNANT DISEASE OF THE LIVER

(Concluded from page 108)

- ³³Masopust J, Kithier K, Radl J, Koutecky J, et al.: Occurrence of fetoprotein in patients with neoplasms and non-neoplastic diseases. *Int J Cancer* 3:364-73, 15 May 68
- ³⁴Ruoslathi E, Seppala M: α -Fetoprotein in normal human serum. *Nature* 205:161-2, 21 Jan 72
- ³⁵Martin F, Martin MS: Demonstration of antigens related to colonic cancer in the human digestive system. *Int J Cancer* 6:352-60, 15 Nov 70
- ³⁶Pierce GB: Differentiation of normal and malignant cells. *Fed Proc* 28:1248-54, May-Jun 70
- ³⁷Hersh T, Hollinger FB, Goyal RK, et al.: Australia antigen and antibody and alpha-fetoglobulin in hepatoma patients. *Int J Cancer* 8:259-263, 15 Sep 71

Theodore Hersh, M.D.
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Precautions: In the elderly and debili-

tated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the

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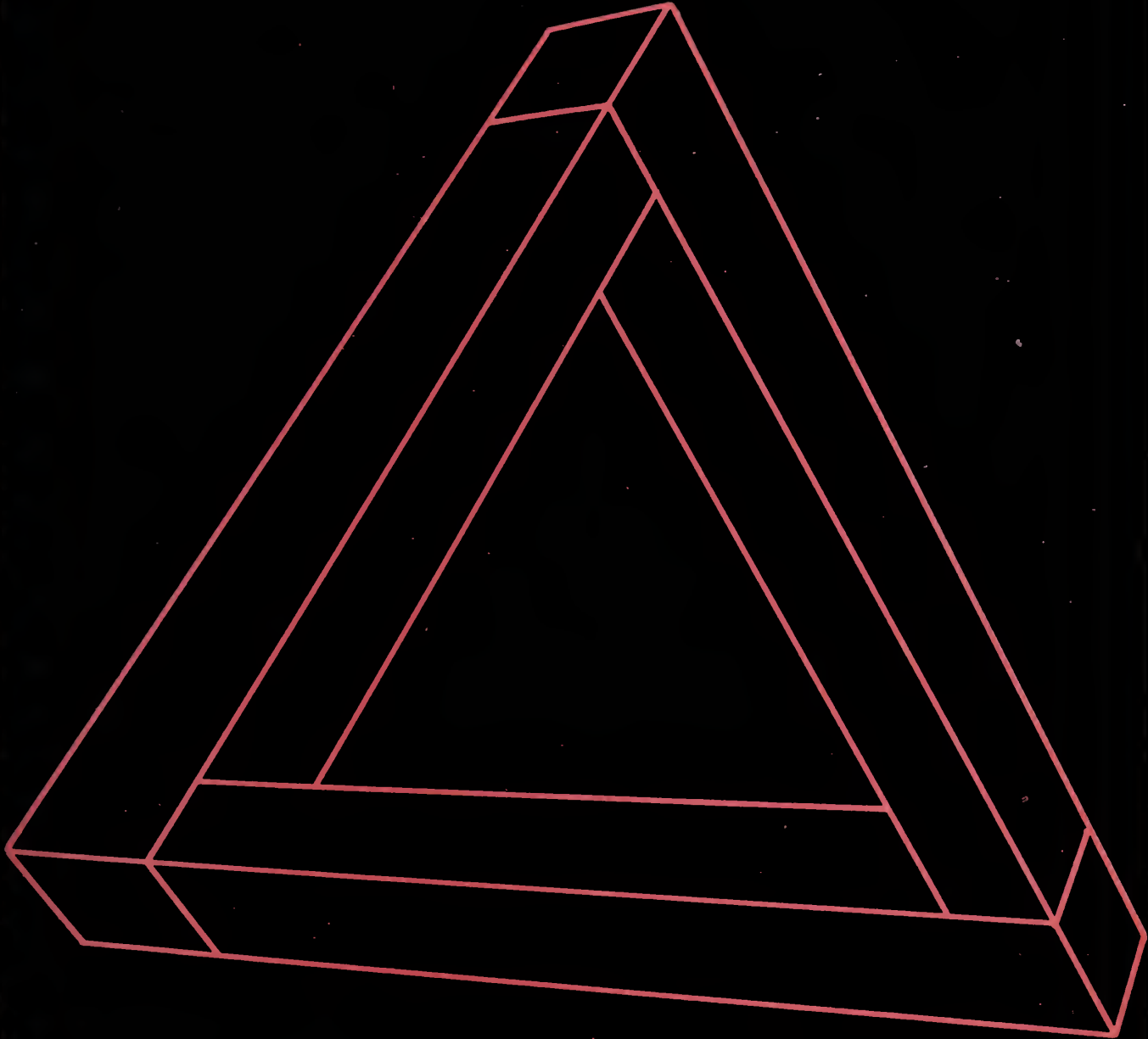
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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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Rhode Island Medical Journal

APRIL, 1973

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Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, periarteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

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Sleep with consistency— no waning of therapeutic effectiveness

Over multiple nights of therapy, no waning of drug effectiveness was noted. There was consequently no need to increase dosage during the study periods. It stands to reason that the fewer repeat or incremental doses needed to sustain sleep, the lower the total cost of the sleep medication. Consistent effectiveness is the measure of Dalmane (flurazepam HCl) economy.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, nonbarbiturate agent proved effective and relatively safe for relief of insomnia.

DALMANE[®]

(flurazepam HCl)

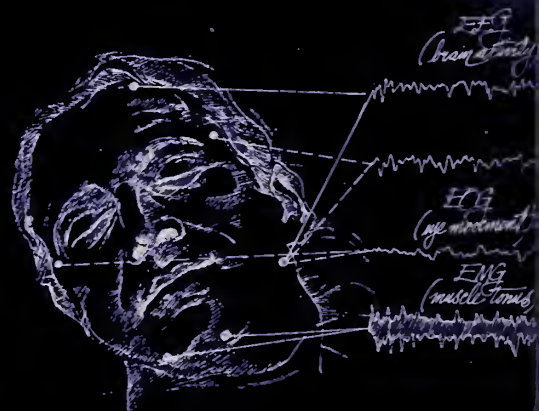
When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage.

One 15-mg capsule *h.s.*—initial dosage
for elderly or debilitated patients.



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Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:
Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effect. Employ usual precautions in patients who are severely depressed, or with



ent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech,

confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients.

Elderly or debilitated patients: 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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MEDICAL EVENTS CALENDAR

Thursday, Friday, Saturday, May 3, 4, and 5, 1973

**FOURTH J. MURRAY BEARDSLEY SURGEON-IN-CHIEF
PRO-TEMPORE**

Dr. William Scott, Jr.

Professor of Surgery and Chairman of the Department,
Vanderbilt University Department of Surgery, Rhode
Island Hospital

Rhode Island Hospital
George Auditorium

Monday, May 7, 1973

**DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
COLLOQUIUM**

Dr. Joseph Varner

Atomic Energy Commission, Plant Research Laboratory,
Michigan State University

Brown University
Wilson Hall 102
4:00 p.m.

Friday, May 11, 1973

**POLYADENYLATE SEQUENCES IN MESSENGER RNA AND
HETEROGENEOUS NUCLEAR RNA**

Dr. Mary Edmonds

Associate Professor, Department of Biochemistry, Uni-
versity of Pittsburgh, Pittsburgh, Pennsylvania

Brown University
Wilson Hall 102
4:00 p.m.

Saturday, May 12, 1973

THE CURRENT STATUS OF RENAL TRANSPLANTATION

Dr. John T. Harrington

Assistant Professor, Renal Unit — Department of Medi-
cine, Tufts New England Medical Center, Boston,
Massachusetts

Rhode Island Hospital
George Auditorium
10:00 a.m.

Friday, May 18, 1973

Dr. Donald L. Paulson

Rhode Island Hospital
Details Incomplete

Saturday, May 19, 1973

Dr. Donald L. Paulson

Rhode Island Hospital
Details Incomplete

MEDICAL EVENTS CALENDAR

Monday, May 21, 1973

DIET AND HEART DISEASE — WHAT WE KNOW AND DON'T KNOW

Dr. David Kritchevsky

Chairman, Graduate Group on Molecular Biology,
Professor of Biochemistry, School of Veterinary Medicine,
University of Pennsylvania. Co-sponsored by the
Nutrition Council of R. I., Inc. and the New England
Dairy and Food Council

R. I. Junior College
Amphi-Theater
7:45 p.m.

Saturday, May 26, 1973

THE PHYSIOLOGIC BASIS FOR THERAPY OF THE ACUTE RESPIRATORY DISTRESS SYNDROME

Dr. Samuel R. Powers, Jr.

Professor of Surgical Laboratory, Albany Medical
College of Union University, Albany, New York

Rhode Island Hospital
George Auditorium
10:00 a.m.

Thursday, June 7, 1973

ALCOHOLISM: CAUSES, CONSEQUENCES AND TREATMENTS Registration and Opening Remarks

Butler Hospital
Ray Hall
9:00 a.m. — 10:00 a.m.

THE SOCIAL ASPECTS OF ADDICTION

Dr. Seldon Bacon

10:30 a.m. — 11:30 a.m.

PATHOPHYSIOLOGY OF ALCOHOLISM

Dr. Jack Mendelson

1:00 p.m. — 2:00 p.m.

PSYCHODYNAMICS OF ALCOHOL ABUSE

Dr. Joseph Rosenfeld

2:30 p.m. — 3:30 p.m.

Workshop with Drs. Bacon, Mendelson and Rosenfeld

3:45 p.m. — 5:00 p.m.

Friday, June 8, 1973

THE USE OF COVERT CONDITIONING AND THE TREATMENT OF ALCOHOLISM

Dr. Joseph Cautela

9:30 a.m. — 10:30 a.m.

MEDICAL RX OF ALCOHOLISM

Dr. LeClair Bissell

11:00 a.m. — 12:00 noon

TREATMENT APPROACHES

Frank Hayes, M.S.W.

1:30 p.m. — 2:30 p.m.

Treatment Panel

3:30 p.m. — 4:30 p.m.

Closing Remarks

4:30 p.m. — 5:00 p.m.

Limited Registration — For information call 521-3400

Saturday, June 9, 1973

INTERRELATIONSHIPS OF CARDIO-RESPIRATORY PHYSIOLOGY

Dr. Joseph M. Civetta

Departments of Surgery and Anesthesiology, University
of Miami School of Medicine, Miami, Florida

Rhode Island Hospital
George Auditorium
10:00 a.m.

House Of Delegates Of The American Medical Association

Report Of The Clinical Session, November 26-29, 1972

By Edmund T. Hackman, M.D., Delegate, and
Seebert J. Goldowsky, M.D., Alternate Delegate

The AMA will "provide a dominant role of leadership in the implementation of the PSRO program to assure that the best interests of the public and the profession are preserved," the House of Delegates, decreed, in acting on the major issue at the 1972 Clinical Convention. This will be done by creating an Advisory Committee on Professional Standards Review to help provide input from the medical profession in development of PSRO regulations, and to help constituent societies set up PSRO's, among other things.

On other matters, President Carl A. Hoffman offered bold suggestions on solving the problems of catastrophic illness insurance coverage for Americans and the maldistribution of physicians. And delegates gave their approval to budget restraint measures within the AMA.

Meeting for a total of 8 hours and 55 minutes, the House acted on 59 reports and 65 resolutions, the greatest number of measures presented at a clinical meeting in several years.

PSRO'S

The AMA will "provide a dominant role of leadership in the implementation of the PSRO program to assure that the best interests of the public and the profession are preserved," the House decreed, in adopting Report Z of the Board of Trustees and the Council on Medical Service. The issue of PSRO — Peer Standards Review Organization — was No. 1 at the convention.

A lengthy plea by one delegate that the House defer action on Report Z — which he called a "complete reversal of our policy" — was rejected. Report Z noted that while PSRO legislation was pending in Congress, the AMA questioned whether its emphasis on cost control might not lead to a lowering of the quality of medical care. But since it is now law, the report said, AMA should act to guard the interests of the public and the profession.

An AMA Advisory Committee on Professional Standards Review will be created by the Board of Trustees. It will include members of the Board and Council on Medical Service. In addition, the Board may invite other appropriate organizations to participate.

Among responsibilities of the Committee are these:

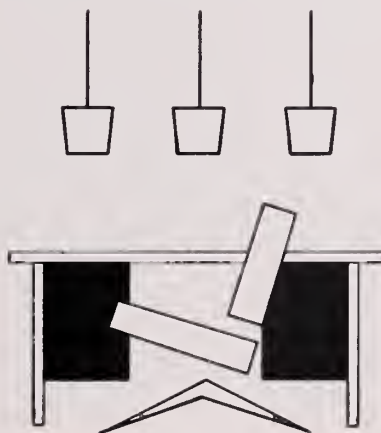
1. To provide input from the medical profession in the development of rules and regulations which will govern the PSRO program.
2. To assist state medical associations, or state medical associations in concert with county so-

(Continued on Next Page)

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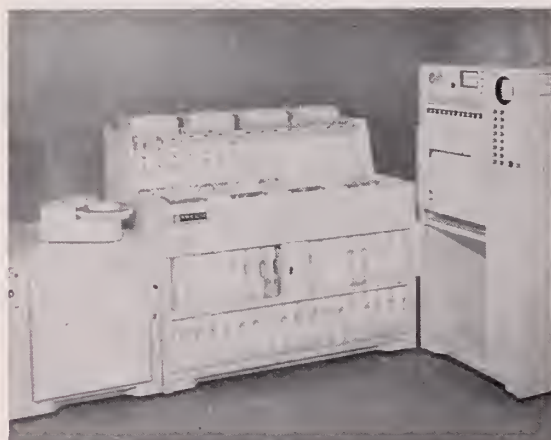
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Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

cieties, in developing PSRO's and to recommend structures and operating mechanisms for such organizations.

3. To aid in defining appropriate geographic boundaries for PSRO's, especially where more than one state be involved.

In addition to the eight areas of responsibility outlined in Report Z (including the above) floor amendments added several more which would have the Committee:

Develop and distribute information about PL 92-603 to constituent societies, monitor the effect of PSRO on medical care, and report to each future House session; and instruct the House and state societies on procedures to follow "whenever rules and regulations interpreting the law and published in the Federal Register seem to be contrary to the spirit of the law as written."

ADDRESS OF THE PRESIDENT, DR. CARL A. HOFFMAN

Doctor Hoffman offered bold suggestions as to how some long-decried national health problems might be solved.

The major problems, he said, are protecting Americans from financial ruin due to catastrophic illness, and the maldistribution of physicians as it affects the inner city and rural areas.

Doctor Hoffman, in reporting on his recent European survey of health care systems, showed a film of his interviews in England, Sweden, West Germany and the Soviet Union.

"What impressed me most," he said, "was the fact that the health care problems of the United States also are to be found in these other nations — where economic, political and cultural conditions are so different from our own."

The nations he visited also grapple with maldistribution, which limits access to medical care for some citizens.

"But we in the U.S. appear to be sadly deficient in insurance coverage for catastrophic illness," the AMA president said. "No one in this affluent nation should suffer financial deprivation or bankruptcy because of serious illness or accident."

The Huntington, W. Va., urologist said insurance company executives had told him there were "insoluble problems" involved in providing such coverage. "But I have a suggestion which may help solve one of those problems, that of abuse.

"I suggest that a number of conditions be speci-

(Continued on Page 138)

"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

**Are there significant
differences in bioavailability
and clinical predictability
among drug products?**

Opinion

Results of a questionnaire to
7,000 physicians:

44.6%

**Agree there is a significant
difference**

24.9%

Believe there is no difference

30.5%

Had no opinion

Are there significant differences in bioavailability and clinical predictability among drug products?

Teacher of Medicine

Alfred Gilman, Ph.D.
Wm. S. Lasdon
Professor & Chairman
Department of
Pharmacology
Albert Einstein
College of Medicine of
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalent

lency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

The Problem of Controlling Bioavailability of Generics

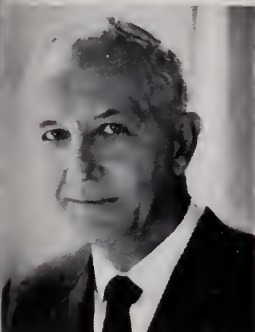
The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

Clinical Predictability More Important Than Price

Although the question of price has been greatly exaggerated, it is true that patients can on occasion save money on generic drugs. But you are not going to dare attempt to save money if it jeopardizes patient's health. Let's turn to the example that has become very prominent in recent years, that of cardiac glycosides. They are probably the most toxic drugs we use with respect to the small difference between a maximally effective dose and a toxic dose. When you are dealing with drugs of this type, the first concern must be clinical predictability. At the risk of variations in bioavailability, it would be sheer folly to try to save the patient what might amount to maybe \$10 or \$20 a year. The physician cannot manage his patient unless he is sure that the drug he is prescribing has the same positive effect each time the prescription is renewed. This is especially significant when the patient takes the product, not for momentary relief but for the rest of his life.

Maker of Medicine

C. J. Cavallito, Ph.D.
Executive Vice President
Ayerst Laboratories



minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequiva-

lent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalence have appreciably improved.

Product Selection

Based on Patient Response

Improved specifications and standards can better assure the equivalence of drug substances. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the drug product, not the drug substance, that the physician, pharmacist, nurse and patient-customer utilize. How can these indi-

viduals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Although equivalence of different preparations of a drug substance may be defined by certain physical, chemical or biological characteristics, identity is not always assured even though these characteristics may be described in compendia such as the USP, NF or defined by other specific source standards. Moreover, even with equivalent drug substances, similar pharmaceutical products may be produced by different manufacturers such that these products are bioequivalent or therapeutically equivalent.

Growing Awareness of Potential for Nonequivalence

As experience increases with drug substances derived from different sources and under different conditions, it should be possible to establish specifications in sufficient detail to minimize the potential for their nonequivalence. However, there is general agreement that product therapeutic equivalence would still not be assured even if one could

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: Therapeutically, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

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Each gram contains: Aerosporin[®] brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 m. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packet



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of \$250. The primary objective of the Fund is to achieve long-term growth of capital. The Board of Directors of the Beacon Mutual Fund recently appointed Douglas T. Johnston & Co., managers of the Johnston Mutual Fund, as investment adviser and managers. You are invited to write for a prospectus. Please address inquiries to Beacon Investing Corp. Box #104, 7 Whittier Place, Boston, Massachusetts 02114

AMA HOUSE OF DELEGATES REPORT

(Continued from Page 136)

fied as catastrophic — hemophilia, stroke, severe burns and severe injuries, for instance.”

Perhaps certain stipulations could be made to provide coverage for unforeseen or extremely unusual situations, he said, adding:

“A precedent has been established by HR 1, which recently became law and provides financial protection for those undergoing renal dialysis.

“I cannot believe that this proposal is not workable.”

As for maldistribution of doctors, Doctor Hoff-

man offered what he called “perhaps a revolutionary suggestion” on how to get physicians into rural areas: A “strictly voluntary” program under which needy students could get a medical education with state or federal financing, by signing an unbreakable contract to practice in needy areas for three or four years. He would have no option to repay the loan in cash.

To control the program, medical societies and licensing boards could grant temporary licenses, allowing the physician to practice only in the designated community. After the period of service was completed, the physician would get complete licensure.

In regard to doctor shortages in the inner cities, Doctor Hoffman said, “It is possible that part of the solution may lie in neighborhood health centers.”

His proposals were referred to the Council on Medical Service.

BUDGET AND FISCAL RESTRAINT

A summary of the 1973 AMA budget, prepared by the Office of Finance and the Finance Committee, drew congratulations from the reference committee which studied it. And budget-cutting action recently taken by the Board of Trustees was approved by the House.

“In considering the budget for 1973, the Board of Trustees made a determined effort to exercise fiscal restraint, and to allocate our financial resources according to priority needs,” the Board said in Report A. The budget summary anticipates 1973 gross revenues of just over \$37 million and operating expenses of \$36,322,000, leaving a projected surplus of about \$800,000.

Fiscal restraint action taken by the Board included the termination of four councils and six committees. One resolution sought to rescind termination of the Council on Drugs, but the House instead adopted a substitute resolution. That measure says the Board shall continue to use “all appropriate AMA resources and methods indicated, to the point of establishing a committee, if necessary, to delineate clearly the independent AMA policy on drugs and drug therapy.”

Another economy action was making specialty journals available on subscription only, starting Jan. 9. Prism, the AMA’s new socioeconomic publication, will be sent as a membership benefit, along with JAMA.

TERMS OF TRUSTEES

As authorized at the 1972 annual meeting, House
(Continued on Page 139)

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Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritat-

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Cold or



Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants

and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants

such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

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Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

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AMA HOUSE OF DELEGATES REPORT

Continued from Page 138)

members balloted on the question of terms of office of board members.

At present, trustees serve three-year terms, with a maximum of three terms. Eighty-nine delegates voted to continue this policy but the majority, 128, voted for a maximum of only two three-year terms. There were 14 votes for two terms of four years each, and six votes for a single six-year term of office. The matter was referred to the Council on Constitution and Bylaws for study and possible recommendations.

MEDICAL CARE OF THE POOR

Since the House in 1971 urged creation of state and local medical society committees concerned with health care of the poor, 23 state and 29 local societies have set up such panels. And they are now developing programs to improve health care services. This progress note is included in Report G of the Council on Medical Service, which the House urged be given wide distribution. The report emphasized that local systems must be developed to meet local needs.

On related measures, the House urged organized medicine to continue to provide assistance and work to improve the quality of care in free clinics, which are increasing in number around the nation. Currently, there are more than 200 of them in 30 states.

They provide a variety of services and, as the report approved by the House points out, for those people who might not otherwise receive *any* health care, they are filling a real need.

The House also approved a statement on the concept of health outreach, whereby lay workers serve to bridge the cultural gap between patients, professional staff and the community, and assist in effective delivery of health care. Among several sound reasons for using such workers, the report says, is that they free doctors and other health professionals to better utilize their time and thus extend the scope of their services. The statement recommends that the AMA, state and local medical societies encourage the use of such personnel, and that the AMA institute educational activities for physicians and other health professionals on the use of outreach workers.

BLOOD BANKS

The House adopted Report N of the Board, which deals with new federal regulations in regard to collection and distribution of blood. Among the

recommendations to be given to a federal panel on blood banking are:

That operating standards of the American Association of Blood Banks and the American Red Cross be recognized and accepted; that physicians be represented on any national panel set up to advise on procurement or use of blood, and that programs to increase voluntary blood donation be encouraged.

YOUNG PHYSICIANS

The Council on Long Range Planning and Development will be expanded to include one Intern
(Concluded on Next Page)

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and Resident member of the AMA as a full voting Council member, the House decided. That member is to be appointed by the Speaker of the House, who subsequently announced that he intends to name Dr. John Mather of the University of Maryland Hospitals, outgoing chairman of the Interns and Residents business session, to the post.

Proposals to appoint an intern or resident to the Councils on Medical Education and Medical Service were deferred for further study and the Council on Constitution and Bylaws directed to offer specific recommendations for action at the 1973 annual meeting.

For the first time in the history of the AMA, a medical student took his seat in the House of Delegates. He is George Blatti of Minneapolis, a senior medical student at the University of Minnesota medical school. In another action, the House set annual dues for student AMA members at \$15.

ELECTIONS

Three AMA members of the new Coordinating Council on Medical Education were elected by the House: Merrill O. Hines of New Orleans, one-year term; Bernard J. Pisani, New York, two-year term, and Tom E. Nesbitt, Nashville, House vice speaker, three-year term. All future elections will be for three-year terms.

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IRS RULING

The House was informed that an Internal Revenue Service ruling — which barred physicians from withdrawing voluntary contributions to their Keogh Law plan prior to disability or age 59½ — will be revised to permit withdrawal of such contributions made to a qualified plan prior to March 6, 1972. The AMA had vigorously protested the ruling, and delegates complimented AMA staff for its "prompt and effective action."

AWARDS

George Hoyt Whipple, M.D., winner of the 1934 Nobel Prize in medicine and founder of the University of Rochester School of Medicine and Dentistry, was selected to receive the Distinguished Service Award of the AMA. Doctor Whipple, now 94, received his M.D. degree from the Johns Hopkins University medical school in 1905. He won the Nobel Prize for his work in pernicious anemia, particularly in the use of liver in treatment.

Leslie Townes (Bob) Hope, the famed entertainer, will receive the Layman's Citation for Distinguished Service. His contributions to the Eisenhower Medical Center in Palm Springs, Calif., including its 80-acre site, totals nearly \$1.5 million. Mr. Hope also has staged fund raising dinners which have brought another \$3.5 million to the center.

Both awards will be presented at the 1973 annual meeting in New York.



JOB OPENING

Superintendent (salary \$23,137.40 to \$29,408.60) or Superintendent Administrative (salary \$21,333 to \$27,105) at the Dr. John C. Corrigan Mental Health Center, Fall River, Mass. M.D., bd. elig., & lic. to pract. in Mass. req'd for upper sal. range; Supt. Adm. req's doctoral degree in appropriate discipline (psychol., soc. wkr., etc.) or grad. degree in hosp. admin., at least 4 yrs. admin. or clinical exp. in a facility in mental health or mental retardation. Closing date May 15, 1973. Forward resume to Edward T. Sullivan, 333 Milliken Blvd., Fall River, Mass. 02721.

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MAY 9 and 10, 1973



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**Professor of Surgery
University of Pittsburgh
School of Medicine**

WEDNESDAY, MAY 9, 1973:

7:30 A.M. —Surgical Staff Conference

**12:00 Noon—WHITMARSH ORATION — *Bernard Fisher, M.D.*
“Biological Considerations in the Management of
Primary Breast Cancer.”**

2:00 P.M. —Surgical Staff Presentations

THURSDAY, MAY 10, 1973:

10:30 A.M. —Papers By Staff Surgeons

12:00 Noon—CLINICOPATHOLOGICAL CONFERENCE — *Bernard Fisher, M.D.*

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Book Review

NATURE AND NUTURE IN ALCOHOLISM.

Edited by Frank A. Seixas, Gilbert S. Omenn, E. David Burk, and Suzie Eggleston, *Ann NY Acad Sci* 197:1-229, 25 May 1972.

This is a major work on alcoholism. It has been known for years that a person suffering from alcoholism is likely to have a parent or sibling likewise involved. This book reports on a conference organized to study this phenomenon through some thirty-seven contributors, plus a number of introductory discussion sections. In the nature segment by Omenn and Motulsky from the University of Washington the authors in *Biochemical Approach to Alcoholism* point out the inherited differences in metabolism of isoniazid, sulfas, dapsone, and other drugs metabolized by acetylation. The inability to pinpoint whether ethanol or acetaldehyde is the active metabolic substance demonstrates the limited understanding of the mechanisms and sites in affected tissue of man.

Fifty years ago Chvostek noted that individuals who develop liver cirrhosis tend to lack the normal amount of body hair, and this was again noted in the German literature in the early 1950's. Eighty-six per cent of a sample of males with cirrhosis showed no chest hair and little arm hair, while only twenty per cent of a group of age-matched controls showed this. This is of some clinical interest but also raises the question of hormonal effects on ADH and other enzyme systems.

In animal studies, hybrids of a cross between mice of high alcohol preference strains (B/6) and low alcohol preference strains (D/2) showed patterns of ethanol ingestion that could be fitted to a locus difference between the two parental strains, possibly accounting for variations in free choice ethanol consumption in terms of interaction between a smaller number (perhaps two) of physiological variables.

Studies by Brewster (University of Birmingham, England) showed that "the genetic mechanism governing voluntary ethanol intake emerged as an additive system with a high heritability and complete dominance in the direction of high ethanol intake."

Lester and Freed studied the rat as a model for alcoholism. They caution that the mere drinking of alcohol, even if competitively with water, does not satisfy them as a model, since the rat may

arrive at the decision from a caloric need, and not from the same motivation as man.

Nichols attempted to show in offspring of rats an inherited tendency toward morphine or alcohol addiction. As far as implications for man are concerned, as Nichols states, "Undeniably, there are great differences between man and rats."

Murray describes a maturity progression of isoenzymes of liver ADH with new bands in starch gel electrophoresis during late fetal life, early childhood, and again at puberty. Two common phenotypes were found among the adult sample.

Chromosomal irregularities were found in organic brain-damaged alcoholics; even transient alcoholics showed abnormal diploid complement in less than a fourth of the examined cells. Studies of arrested alcoholics showed a long persistence of the abnormalities, but nevertheless a slow return to normal.

Schuckett reports a study of twins in which half-siblings (one related to the proband through only one of the biologic parents) were studied as to whether they were alcoholics, and whether the alcoholics had (a) an alcoholic biologic parent and (b) lived with that parent. The data indicate that the genetic factors appeared more important, but behavioral determination is so multifactorial that alternate conclusions might be drawn. Unfortunately the final numbers with which he is dealing are small. Study of twins is fraught with many dangers, not the least of which is defining "alcoholism."

One section is concerned with genetic markers which are used for two entirely different kinds of studies. *Linkage* is familiar to most physicians in the sex-linked aspects of hemophilia. *Association* is the phenomenon of more individuals of blood group O being found in the duodenal ulcer patients than in any other group. The papers attempt to establish association between blood groups and alcoholism, as well as one between color blindness and alcoholism. In this country at least, color blindness was found to be a function of dietary and other deficiencies of the alcoholic which improved along with the physical condition. Again, here it is difficult to compare studies because of the lack of solid definition of alcoholism.

Of interest to the perinatal specialists is the finding that intrauterine growth failure occurred in 83 per cent of the offspring of women in whom alcoholism was readily recognized. The cause of the intrauterine growth failure has not been clearly established, but the association neverthe-

less appears to be there. A pertinent anterospective study will present many practical social difficulties inasmuch as it would be difficult to get a truly reliable history from many mothers. Barry and Blane studied birth order as an environmental influence on the development of alcoholism and found an over-representation of lastborn males in larger families where parents, particularly mothers, were first-born in their families.

The presence of male, rather than female, older siblings was also present in this group. The over-representation of last-birth positions was not consistently found in female alcoholics.

McCord studied the backgrounds in alcoholics and criminals and found that alcoholics had unique exposure to non-punitive parental rejection and sex-role confusing homes. McCord concludes that contrasts appear reliable enough to suggest that conditions of nurturing be given recognition to etiological descriptions of alcoholism.

Burk discusses child development in the alcoholic process and feels that the children of alcoholics learn from their parents complex patterns of behavior that give them a preset series of responses with which they react in their own adult life when faced with stress. He also mentions the exposure of children to mass media that encourage alcohol use as a necessary accompaniment of human pleasure and socialization. However, as Burk points out, all the children of alcoholics do not themselves become alcoholics, so that there are other factors not yet understood. Burk states "we must break the cycle of the young pre-disposed toward alcoholism—alcoholism is still the greatest drug problem in this culture."

Jessor has an important paper on the social-psychological aspects of adolescent "passage" into drinking. Unfortunately, these studies are directed more toward the transition from non-drinker to drinker than from non-problem to problem drinker. It is of interest to note that seven of eight drinkers with "two problems" in drinking came from religious groups traditionally opposed to alcohol use. As one might expect, they conclude, there is a strong social support variable in the abstainer-to-drinker status shift, but the personal attributes are also important.

Louis Jolyon West, with his well-known fresh approach in matters of behavior, contributes a paper on the cross-cultural studies in alcoholism in the Tarahumara Indians, a tribe of Mexican Indians inhabiting rugged mountain terrain and

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among the least acculturated aboriginal group of any size in North America. This group is given to having numerous holidays which are rather grand affairs in spite of their limited facilities and in which a native drink is an outstanding part of the festival. All adult males and females get drunk and violate certain tribal taboos, but in the inter-festival period do not become intoxicated and rarely drink alone. As Doctor West says, "they are happy drinkers safe from alcoholism." The fact that their intoxicating liquor has to be home-made and that it does not keep well may say more about their non-alcoholism than other aspects of the culture.

Chandler (the University of Rochester) discusses the strategy of research into alcoholism, including the technique of retrospective case study, retrospective follow-back studies through the study of records from clinics, schools, and the like, rather from the memory of the patient or family, and prospective follow-up studies. Unfortunately, one would have to anticipate a study for up to forty-five years to insure that incipient drinking problems would have sufficient opportunity for expression. Despite these limita-

tions, this technique seems to hold the greatest promise.

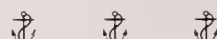
In order to cut the time shorter, he suggests one might take separate groups studied for a number of years until each group has reached the age bracket of the next older segment. Another modification would be selection of "high risk" populations (pre-judgemental?) where presumably one would take the children of alcoholics. The base rate of alcoholism in home-reared children of alcoholics is between 20-50 per cent, but, when genetic and environmental factors are separated (offspring of alcoholics raised in foster homes), the contribution of the genetic portion is greatly reduced. These results raise serious questions about simplistic etiological models of either a genetic or learning theory sort.

Rogers (the Cleveland Clinic) discusses the psychological interpretation of alcoholism and does not contain anything particularly new.

Siegelman discusses the research considerations in studying the family background of alcoholics and raises the questions of "What is alcoholism?". He lists several criteria to apply to the behavior, and several types of studies comparing extroverted with introverted alcoholics as well as non-alcoholics, among other intriguing hypotheses.

All in all this is a publication that has great value for anyone concerned with this extraordinarily severe but inexplicably neglected field of human illness, but in particular has pertinence to the individual with a serious interest in the field.

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M.D. TELEPHONE ORDERS TO NURSING HOMES

According to a suggestion of Dr. Robert V. Lewis, Immediate Past President of the Society, Thomas N. Tierney, Director, Bureau of Health Insurance, Social Security Administration, has adopted the following regulation regarding a physician's telephone order to a nursing home.

Mr. Tierney said that written orders signed by the physician and mailed to the facility on the same day as the telephone order is given are in compliance with the intent of section 405.1123(b) (5) of the Medicare regulations. The proposal, Mr. Tierney related, has been discussed with the Rhode Island Department of Social Welfare and both agencies have agreed that this practice will henceforth be acceptable.

District Medical Society Meeting

PROVIDENCE MEDICAL ASSOCIATION

The 126th Annual Meeting of the Providence Medical Association was held at the Colonial Hilton Hotel in Cranston, Rhode Island on Wednesday, January 10, 1973. The meeting was preceded by a social hour with the Association as host, and by dinner for members of the Association and their wives. An attendance of 94 was recorded.

ANNUAL REPORT OF THE SECRETARY

The annual report of the Secretary was presented by Doctor George V. Coleman in printed form for each member present.

Action: A motion was made, seconded and voted that the annual report of the Secretary be received and placed on record.

ANNUAL REPORT OF THE TREASURER

The annual report of the Treasurer which will be subject to professional audit was submitted by Doctor John B. Lawlor in printed form for each member present.

Action: A motion was made, seconded and voted that the annual report of the Treasurer be received and placed on record.

AWARD OF MEMBERSHIP CERTIFICATE

The President awarded a membership certificate to Doctor Joseph Padayag.

PRESIDENTIAL ADDRESS

Doctor Joseph E. Caruolo delivered his presidential address, copy of which is made part of the official minutes of the meeting.

ELECTION OF OFFICERS FOR 1973

Doctor George V. Coleman, Secretary, reported that no counter nomination had been received to the slate of nominees of Officers, Executive Committee members, and Delegates mailed to the Association membership by the Executive Committee. He read the list of Officers nominated.

Action: A motion was made, seconded and voted that the slate of nominees as submitted to the membership by the Executive Committee be elected.

REMARKS OF NEW PRESIDENT

Doctor Caruolo appointed Doctor Vito Coppa and Doctor Milton Hamolsky to escort Doctor Thomas F. Head, the new President, to the lectern.

Doctor Head briefly addressed the membership, and copy of his remarks are made part of the official minutes of the meeting.

PRESENTATIONS TO DOCTOR CARUOLO

Doctor Head paid tribute to Doctor Caruolo for his outstanding leadership of the Association during

1972, and presented him with an engraved silver Revere bowl, and an engraved gavel as gifts from the Association.

Doctor Caruolo thanked the members for the fine cooperation they had given him during his tenure as President, and he also paid tribute to the Woman's Auxiliary of the Association for its fine educational meetings sponsored for its members, and for its activities in behalf of the Association.

He reported that he had telephoned Bellevue Hospital in New York to convey to Dr. Raul Nodarse the concern of the Association members for his speedy convalescence from the unfortunate accident sustained in New York which resulted in the amputation of both his legs.

ADJOURNMENT

The business meeting was adjourned at 9:20 p.m.

Members and their wives enjoyed dancing to the music of Ralph Stuart until 11 p.m.

Respectfully submitted:
GEORGE V. COLEMAN, M.D.
Secretary



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Slippery When Wet

Being An Essay On Science, Technology, And Responsibility

By Salvador E. Luria, M.D.

THE CHALLENGE AND ITS ROOTS

The subject of this lecture is the relation between science, technology, and responsibility. It is a big subject, but the scope of my remarks is narrower and more specific. I wish to explore the reasons why in recent years science and technology, which used to be the greatest sources of pride and of hope for our future, have come to be questioned by substantial and vocal groups, especially of young people. These critics look with distrust, not only upon specific applications of technology, but on the whole enterprise of science as the acquisition of objective knowledge and of technology as the power to control the forces of nature.

In the seventeenth and especially the eighteenth century the idea that all knowledge would automatically be applied for the good of humanity seemed to be a truism. Thomas Jefferson wrote:

SALVADOR E. LURIA, M.D., of Cambridge, Massachusetts, Institute Professor, Department of Biology, Massachusetts Institute of Technology.

Reprinted from the Proceedings of the American Philosophical Society, Vol. 116, No. 5, October 1972, with the permission of the author and publishers.

Delivered at the 161st Annual Scientific Assembly of The Rhode Island Medical Society.

"There is no truth that I would fear to be known."

Later, in the nineteenth century, technology based on the new science flourished in a most vigorous way, providing the foundations for modern industry and leading in turn to new scientific progress by a continuous positive feedback. The development of the science of electricity and of electric power, and of chemistry as a source of new materials, seemed to point unmistakably the way to the future.

Admittedly the attitude of the untrained public toward science always had an element of superstitious distrust. But the prevailing attitude toward technology was decidedly optimistic.

Was this optimism justified? Was the *laissez-faire* attitude of the liberal economists, with its implied assumption that developments in technology would automatically bring prosperity and eliminate war, poverty, and disease, the correct philosophy for society? Was the nineteenth-century path a royal way to perfection or was it a blind alley to perdition? The warning I have chosen as title for tonight's talk — Slippery When Wet — can be felt clearly in the thinking and writings of many people throughout our society.

What is new today, especially among the young, is the questioning not just of the uses of technology

(Continued on Next Page)

but of the very technological direction in which human society is moving, in both capitalist and socialist countries. This questioning irrespective of its merits, serves at least one useful function. It reminds us that, in the shaping of our culture there is nothing automatic, nothing that is dictated either by prime causes or by predetermined final outcomes. Culture is a creation of men, a product of the minds and efforts of men throughout the world and throughout the ages. Science and technology are part of a program over which we have control and for which, therefore, we have responsibility. As expressed by the British biologist Peter Medawar, "The bells that toll for mankind are attached to our own neck, and it must be our fault if they do not make a cheerful and harmonious sound."

What has happened to cause in many people a change of attitude toward science and technology? One major cause, I believe, has been the shattering within this century of certain illusions about the course of human progress. The First World War destroyed the illusion of an earlier generation — the generation of my father — that wars would disappear and that conflicts between nations would be resolved peacefully by rational agreements. This illusion, of course, ignored the enormous injustices between rich and poor nations and the exploitation of the latter by the former. But there is no doubt that the First World War came as a rude awakening.

Then just as the world was beginning to recapture the illusion of a smooth future of progress, came another shattering experience. In one of the most technically advanced nations of Europe there arose a political monster — a regime based on the open denial of the ideal of human brotherhood, on the celebration of race and state and of force, and on the application of the fruits of human ingenuity to the corruption of the human spirit. This shock was even more damaging to the vision of a smooth automatic progress. For, if the realization that human institutions can go wrong is painful, the idea that human institutions can be set up in order to do wrong is utterly unbearable.

Then, with the Second World War another fateful development took place: the acceptance of mass slaughter, of the bombing of defenseless civilian populations, first in Holland and England, then in Germany and Japan, culminating in the atomic bombing of Hiroshima and Nagasaki and continuing to this very day. The atom bomb

brought home to every citizen of the world the fact that a great discovery of science had been applied directly to mass destruction even before its possible constructive uses had had a chance to be explored. Even more disconcerting, the peace of the world has since then been based, not on mutual understanding, but on the balance of nuclear terror; on the realization that several governments at enormous expense of scientific and technological resources, have equipped themselves with the capability of annihilating each other's nations — and possibly even mankind altogether.

This brings us to another reason for the widespread questioning of the role of science and technology in society: the dimension and the rate of the changes that science-based technology can bring about. The perturbations produced by technology are reaching the same order of magnitude as the intrinsic dimensions of the natural and social phenomena which they affect. Today's weapons can destroy a substantial portion of humanity. But this is only one example. Take agriculture and public health. We have long known that the technology based on these sciences was increasing the production of food, improving sanitation, removing many of the traditional ills of mankind — starvation, filth, epidemics — and increasing life expectancy by decades. But we were not sufficiently aware that the same technology that made our lives longer and richer and healthier was bringing about the threat of overpopulation, which may well become the number one problem facing humanity. Likewise in our technological optimism we closed our eyes to the fact that uncontrolled use of natural resources by the industrially developed nations could bring about the exhaustion of critical raw materials, deplete world reserves, alter the environment, and make it even harder for other nations to approach a comparable standard of productivity.

Modern technology, while contributing unquestionable benefits to large parts of humanity, has by its size and complexity brought about the need for ever larger, more elaborate, more impersonal institutions in order to run the technological machinery. The modern corporation, the modern state, whether socialist or capitalist, are complex machines forged to manage at some level of efficiency a technology that has become indispensable to the functioning of industrial society. These institutions become increasingly depersonalized. The human element seems to disappear. The

average individual feels that he has less and less understanding and less control over the forces that mold the world in which he lives. Puzzlement becomes discouragement and then alienation. And with alienation comes the questioning, not only of the social structure, but also of its technological foundations and finally, of the scientific enterprise itself.

Increasingly, men fear that society will become committed irreversibly and automatically, to a purely technological future. They question not only the possible misuses of technology, from atom bombs to thoughtless pollution to the wasteful depletion of rare resources, but also the invasiveness of technological thinking and the neglect and contempt of alternative values. The slope of commitment to an overpowering technology is steeper and steeper. Down this slope society proceeds with profound misgivings. Will the joy-ride prove to be a descent into the abyss? Do we need a warning sign — slippery when wet?

GENETIC TECHNOLOGY — BLESSING OR THREAT?

To illustrate concretely the change in attitude toward science and its products, allow me to use the example of my own science, molecular biology. This is a rather esoteric field the study of the molecular basis of cellular functions such as the replication and the function of genes, the synthesis of proteins, the assembly of cellular membranes. We have made great progress in understanding the basic phenomena of life, the chemistry of deoxyribonucleic acid (DNA), the regulation of gene function, the mechanism of enzyme action. As yet there have been no practical applications of the newest knowledge; it has been as "pure" a science as some branches of mathematics. It has in fact been challenged from some quarters for its lack of relevance that is, for its lack of explicit practical purpose. Now, however, we begin to see the possibility of practical applications in a not too distant future. We have learned how to isolate certain bacterial genes in pure form, to transfer them from cell to cell, and even to synthesize some genes chemically. We have learned that some viruses can act as vehicles for transferring genes from cell to cell. Chromosomes or fragments of chromosomes can be introduced into living cells by cell fusion in the test tube. As a result of these discoveries, the remote but distinct possibility exists that similar genetic intervention can ulti-

mately be carried out in man, so that one may treat genetic diseases by correcting the genetic defects rather than only by remedying their consequences.

It may even become possible, by a combination of the techniques of genetics and embryology, to alter the genetic material in the germ cells themselves. Workers in Great Britain and in the United States have succeeded in fertilizing human eggs with human sperm in the test tube and in inducing the development of the fertilized egg to the stage when it is ready for implantation into the womb. This line of research may ultimately make it possible to introduce into the fertilized egg specific genes or chromosomes. It may even become feasible to reproduce human beings "clonally," by transplantation of nuclei from adult cells into enucleated eggs, which would then be reimplanted into the wombs of foster mothers. This description of a genetic engineering still to come may sound like science fiction; but science fiction has the disturbing habit of becoming reality much sooner than we expect.

Only a few years ago, the prospect of such future powers to correct the genetic constitution and even the heredity of human beings would have been welcomed as a promise of new medical progress and of self-directed human betterment. And yet these very prospects have caused some people, including thoughtful ones, to raise warnings of potential misapplications. The concern is not only with the ethical problems raised by the manipulation of human germ plasma or the selection of the sex of one's children. What is being feared is the purposeful creation of genetic weapons or the use of genetic techniques like nuclear transplantation to create races of enslaved morons or of ruling supermen. And if we object that these are morbid fantasies we may receive the reply that the idea of an "ultimate solution" of the Jewish problem also sounds like a morbid fantasy, and not like the tragic reality that it was in Nazi Germany only thirty years ago. Apart from these extreme possibilities of misuse of the new biological knowledge there is a more subtle but not less disturbing fear: that manipulation of human heredity for experimental purposes may weaken the respect for human personality by making it acceptable to use men as means rather than as ends — in violation of the Kantian imperative.

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THE FLIGHT FROM RATIONALITY

I have used the example of modern biology to show how the critics of science have come to see science and technology, not as cultural advances and promises of new gifts, but as sources of new dangers. Other examples might be given from chemistry, physics, or computer science. Men are faced with what looks to them like a blind course of technological developments. One of the leading spirits of that supposedly fatal course, John van Neumann, has been quoted to say: "In the field of science and technology, what can be done will be done." Is this really so? Is it wise to couple science and technology in this assertion? Science will discover what is there to be discovered. But is it necessary that every possible technology be developed? And, once developed, must it be used, irrespective of consequences? Man revolts against the prospect of such automatism. He claims for himself the responsibility to fashion his own destiny. He wants to heed the warning and, even if the way of technology is in fact the road of the future, he wants to follow it at his own pace with his eyes open, not sliding blindly down the slippery slope.

In a well-ordered society, the decision-making process with regard to technology — as in all other respects — should be one that is maximally responsive to the range of different and often conflicting values with society. It must give a big place to the question "what for" in contrast to "how" — to the principle of reversible choice versus irreversible automatism. Only a social organization that provides maximum opportunities for public debate, evaluation, and effective decision-making protects society against the surge of technocracy.

Unfortunately, in rejecting what they see as an automatic path of commitment to a technological future, people often go much too far. They reject all of technology, and science itself, as if these were the causes of the ills of society. This is a serious fallacy. It is not the technique that generates the evils, but the way in which it is used. The problem is the uneven development of man's culture, of scientific and technical knowledge on the one hand and social institutions on the other hand. Technologies often become available to societies that are not institutionally prepared to make wise use of them. Hence they can become instruments to foster outdated or inhuman ideologies or tools in the hands of a soulless tech-

nocracy. The problem is not scientific or technical: it is social and political. What must be questioned is the use that society makes of the products of science and the extent to which it commits itself to the technological imperative as a substitute for the Kantian imperative.

Yet the rejection of science and technology as legitimate enterprises of our culture has become widespread. This rejection has been expressed in provocative books such as *THE MAKING OF A COUNTERCULTURE*, by Theodore Roszak and *THE GREENING OF AMERICA* by Charles Reich. These and other writers have challenged the validity of objective consciousness, that is, of the scientific method based on measurement and verifiability. They proclaim instead the superior validity of subjective consciousness, as an assertion of a renewed sense of the value of the individual.

In my opinion this attitude opens another slippery and treacherous slope. In exalting subjective consciousness and deprecating scientific objectivity it falls into the same kind of automatic thinking that it attributes to the way of technology. It fosters the belief that, if only men as individuals would break away from the constraints of the complex society, society would automatically be reformed or vanish away. This is a dangerous belief, which ignores the collective responsibility of mankind to mold its own future. If society needs to be reformed or redirected, this is not going to be done by walking out on it. And, at any rate rejecting technology implies rejecting the aspirations of the masses of humanity in the developing parts of the world, for whom a properly used scientific technology represents the only hope for a better life.

Finally, the antiscientific attitude is dangerous because it becomes a denial of rationality itself. And if a society were to abandon reason as a guide to its policies, the result is likely to be, not the utopia of the worshippers of subjective consciousness, but the nightmare of some new irrational technocracy like that of Nazism.

This is the dilemma. On the one hand, we cannot reject scientific technology as a reality of life. On the other hand, we know that technology, while a source of great benefits, can be misused by society. And we see the danger that the machinery developed to operate modern technology may generate a powerful technocracy insensitive to human aspirations.

What is the way out? We must avoid both the

slippery path of overcommitment to the technological imperative and the equally slippery way of anti-rationalism. We must find means to use the power that science and technology put at our disposal in a rational way, for goals of human satisfaction freely chosen by an informed population. This will not be easy, because many of our institutions and ways of thinking are outdated but hard to change. Nationalism and racism and religious prejudice and the belief in war as an instrument of policy are remnants of a past that has been made obsolete by science. We must find ways to decide wisely on how technologies are to be used — what, when, and in whose interest. We must learn to face the future with what I might call a well-balanced set of mutually restraining values, coupling the powers of technology to the strength of a wise humanism.

THE ROLE OF SCIENTISTS

The responsibility for creating the future society rests with all mankind. But I believe that as scientists we have certain special responsibilities, because our work (even that of molecular biologists) is the source of the technology that society must decide whether and how to use.

In the first place, it is important for scientists to realize that science can never be neutral in a world that employs the products of science. There is no value-free science just as there is no value-free literature or value-free art. Science's purity is in the search of new knowledge to be added to the intellectual patrimony of mankind. But the acquisition of new knowledge does not absolve the scientist from an active concern with the role of scientific knowledge in society. The illusion of purity and neutrality is again a treacherous path — slippery when wet. It is an illusion that may obscure all sorts of compromises. It may make it easier for the least pure among the practitioners of science to cover their anti-social activities under a mantle of innocence.

The situation in the area of applied research, of course, is rarely ambiguous. When it comes to designing new weapons of mass slaughter, few people will maintain that the scientists do not bear some responsibility for the consequences of their work.

Even apart from applied research, however, a scientist often has to make ethical choices in his relation with the centers of power, the places where decisions are made concerning the applica-

tions of technology. He may have to choose between the attractiveness of power, the chance of influencing important decisions, the opportunity to further the applications of his own discoveries, and the risk of becoming a war asset or a partner in a technocratic machine. Is the morality of science compatible with the morality of power? For example, is the practice of science compatible with the commitment to secrecy or at least to silence? Scientists operating within the circles of power may justify their activities by the belief that they can influence decisions into wiser directions. But this belief is often an illusion — witness the failure of the Los Alamos scientists to prevent the atomic bombing of Japan in 1945 or the earlier failure of the British scientists to stop the futile saturation bombings of Germany. A scientist who associates his work closely with the centers of power is more likely to find himself a tool than a leader.

Within his laboratory a scientist has the choice of problems to investigate, at least to the extent that he can obtain financial support. Here the questions become more subtle. To which extent are scientists responsible for the indirect consequences of their work? Should a scientist try to concentrate on problems relevant to the immediate needs of mankind or should he freely pursue the acquisition of new knowledge? Should he choose not to work on problems whose solution may produce results that society has not yet learned to handle wisely?

Let me take an example from a recent controversy. A number of studies have raised the question of the existence and significance of a difference of several points in the average intelligence quotient of black *versus* white American children. Part of the controversy has to do with technical questions of interpretation of the data. But there is a more fundamental issue to be raised: Should such research be done at all? Some researchers have asserted, both in scholarly and popular articles, the overriding need to find out the facts, either in order to devise appropriate educational reforms or in the name of "the right to know," that is, in the interest of pure science. Inquiry should not be shut off, they believe, nor should society be left in ignorance, even though at present there seems to be nothing useful that we can do with that knowledge. But another legitimate concern is that, given the condition of

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our society, the very doing of this kind of research may be a source of mischief. What must be balanced, therefore, is the right to know *versus* the right to do mischief. I for one see no difficulty in choosing, especially if the "knowledge" to be obtained is of little use except to the researcher's career.

I personally believe that not all research is legitimate: its legitimacy has to be judged in terms of its clearly predictable consequences. When it comes to working with human beings, there are curiosities that are not legitimate because they hurt. Medical research has long recognized this principle and other branches of science should recognize it as well.

Leaving aside such controversial areas, there is one important function that scientists can try to fulfill individually and collectively, and that is to educate the public in the facts of science, explaining new developments and their technological consequences. If in a well-ordered society decisions are to be made by the consensus of an informed public, then it is the responsibility of those who know the facts to make them known and explain them to others. Too many of us live in ivory towers, publishing scholarly papers, but neglecting to make contact with the outside world or to understand the workings of the society that makes use of our discoveries.

The disaffection and even the hostility of the general public toward science is based in great part on ignorance and misunderstanding, not only of the relations between scientists, technologists, managers, and politicians in society, but of the elementary facts of science. The astonishingly large number of American citizens, even educated ones, who believe in astrology or extrasensory perception is a testimony, not to credulity, but to the lack of a basic grasp of the nature of science, of the concepts of objective proof and verifiability. Even more serious is the scientific ignorance of supposedly responsible political leaders. British Prime Minister Clement Attlee has been quoted as saying that when he concurred in President Truman's decision to drop the atom bomb he knew nothing of the genetic effects of radiation — and I would be surprised if Mr. Truman knew any better!

What educated citizens should have — and, therefore, should get in school as well as in books and in the mass media — is not so much a superficial knowledge of some physics chemistry, geology,

and biology as an appreciation of the method of science and of the mutual interactions between science, technology, and politics. Besides helping them make informed decisions, such an appreciation would help dispel irrational attitudes of impotent fear, or despair, or mystical worship toward science and technology. It would also counteract the rise of technocratic elites which, having (or being reputed to have) exclusive possession of technical knowledge, tend to monopolize the direction of societal affairs.

Finally, there is another task that concerned scientists can undertake, but rarely do. This task is to be actively involved, as citizens but also as scientists, in the affairs of the society which their work may ultimately change and transform. This involvement, in my opinion, ought not to be limited to acting as expert consultants to government and industries. It could take the form of participation as individuals — not institutionally — at the political level where the basic decisions are or should be made. A democratic society could well use more scientists actively involved in politics, participating in the decision-making process not behind the scenes but in the heat of the political arena. There have been some important illustrations of this. After the Second World War, scientists led the political struggle that achieved civilian rather than military control of atomic energy in the United States. More recently, scientists openly entered the political debate on the deployment of anti-ballistic missiles. In this way scientists help society evolve in a direction that permits a wiser utilization of the fruits of science.

In concluding, let me return to the difficult question of pure versus goal-directed research. Should a scientist, in choosing the subject of his investigations, consider primarily the advancement of knowledge or does he have the obligation to ask himself whether his work is relevant to the immediate needs of society? There has been a rising demand for relevance in science — a demand that scientists apply themselves directly to eliminating urgent ills such as poverty, disease, and pollution of the environment.

These urgent tasks are very real, and many scientists in the applied areas are devoting their work to them. But not all science is applied science. We must be careful not to respond to the call for relevance either by apologizing for basic

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Alcoholism, A Disease?

Concept That Alcoholism Is A Disease Is Not Strongly Supported In Rhode Island Health Delivery Systems

By Roswell D. Johnson, M.D.

Although the State of Rhode Island ranks third in its attack rate of alcoholism, the facilities provided for these individuals in no way suggests that we have such a severe problem. The National Institute of Mental Health has indicated that our state ranks 50th in the mental hygiene clinics, and the record may or may not be appreciably better in community treatment of the alcoholic problem. Only within the past year has the government-sponsored CAP (Community Action Programs) been a working force in Newport, Cranston, and Warwick. The Rhode Island Group Health Association has also in recent months undertaken an outpatient program.

Table I shows a comparison of the facilities in our state with one county in Minnesota (Hennepin), which coincidentally has essentially the same population. The table shows the governmental facilities as well as the private facilities earmarked specifically for treatment of the alcoholic where there is no competition for the beds either in gen-

eral medical service or in psychiatrically oriented institutions.

THIRD PARTY PAYMENTS

Rhode Island Blue Cross and Blue Shield deserve special tribute for their forward looking programs which were in effect before the problem of alcoholism became quite as acceptable as it is today. A recent personal communication from Mr. Frank R. Aday, Executive Vice President of Rhode Island Blue Cross and Blue Shield, says in part, "For more than a decade Rhode Island Blue Cross and Blue Shield have followed the principle that alcoholism is in the same category as any other type of illness, and we make no distinction in any of our coverages in either group or direct pay contracts. Our basic plan provides coverage for in-hospital care at general hospitals, but there is a limitation of 45 days per year in a specialized hospital . . . As to the frequency of alcoholism cases, there are undoubtedly a number of them which are received under one or more of a combination of diagnoses such as malnutrition, and others. However, we do receive a fair number of hospital admissions clearly identified as alcoholism,

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TABLE I
ALCOHOLISM ATTACK RATES/100,000 Adults

	Total Alcoholics			Rates			
	Male	Female	Total	Male	Female	Total	Rank
Minnesota	64,200	13,400	77,600	5.880	1.130	3.510	# 25
Rhode Island	32,200	4,800	37,000	11.010	1.520	6.270	# 3
Total Populations							
Minnesota				3,804,000			
Hennepin Co. (Minneapolis)				960,000			
Rhode Island				941,000			
Facilities Specifically Designated for Alcoholism Care							
	Hennepin County ¹²			Rhode Island			
1. Acute detoxification	Center A	12 beds		Private facilities specifically earmarked. None			
3-7 days	Center B	4 beds* ¹²					
2. Subacute detoxification	Center C	75 beds		Institution A. (State Hospital) 152 beds. 2			
Essentially as #1	Center D	25 beds		closed wards, 1 open ward, and			
				one female ward partly closed			
				and partly open.			
Primary rehabilitation	Vet Adm.	31 beds					
3-4 weeks	Center D	27 beds					
	Center F	22 beds		Halfway Houses: A 5 houses for men, su-			
	Center B	50 beds* ¹²		B pervised and with ac-			
	Center G	48 beds*		C tive AA program			
	Center H	90 beds**		D			
Extended rehabilitation	Center I	205 beds**		E			
6-12 months	Center J	40 beds		—			
	Center K	200 beds		F 1 halfway house for			
	Center L	40 beds**		women, 35 beds. Newly			
	Center M	55 beds**		opened facility and do-			
Halfway Houses	Total	318 beds		ing good work. AA ori-			
"3/4 way" House		12 beds		ented.			
Drop In Center — Indian Care chiefly — 5 full time							
counsellors							
Day Care Centers — Structured out patient capacity							
3 centers about 180 (estimated)							
*Indicates a general hospital							
Within 40 miles are 2 nationally known treatment							
centers (Hazelden with 120 beds and Lynnville with							
66 beds). Also							
**State facilities located in the geographic area.							

and they are paid for just like any other case. In addition, the diagnoses on the claims are strictly confidential and never released to any employer." It would be helpful if all hospitalization and health policies written for the residents of this state were required to equal this type of coverage. Wisconsin has such a state statute.

According to the American Hospital Association: "Some hospitals have found that as many as 50 per cent of their inpatients in various service categories — orthopedics or general medicine, for example — were admitted because of an involvement with alcohol. Also, repeated admissions of the same patients occur with discouraging frequency.

"Admissions of acute alcoholic patients under the guise of some other diagnosis, such as 'cirrhosis' or 'gastritis,' is a disservice to the patient, to the hospital, and to society, because it serves to perpetuate the misconception that alcoholism is not an

illness, fortifies the patient's tendency to deny or rationalize his excessive drinking, does nothing to help him or his family face his real problem, may result in inappropriate treatment or unfortunate delays in initiating emergency procedures because hospital personnel are unaware of the patient's alcoholism and are unprepared for the complications that arise from it, and makes it difficult to gather reliable data on the extent of the problem of alcoholism. If *all* (underlined original source) hospitals adopted a straightforward policy of admitting persons with a frank diagnosis of alcoholism, none of them would have to worry about being singled out as a "drunk tank" as some now seem to fear they would be."

ALCOHOLIC RETREATS

Centers facetiously and pejoratively termed "drying out farms" (Grey Rock, Uxbridge, Mass.; Starlight, Mystic, Conn.; High Watch, Kent,

Conn., and others) make a unique and valuable contribution. They are of course not presently covered by Blue Cross-Blue Shield. Their rates are so low, however (High Watch is currently \$95.00 per week for room, board, and the counselling program) that any employed person can afford them, particularly if his job is at risk. They have a unique effectiveness which should not be disparaged, even though they are not strictly in the medical mode. Physicians are, of course, in attendance for medical needs. One of their most effective tools is the high degree of personal, warm, emphatic concern displayed and with no punitive approach. A returning guest who has "slipped" is greeted in much the same manner as one might meet the cardiac returning with a bout of decompensation. A therapeutic supportive milieu of this type with strong Alcoholics Anonymous (AA) support may not be the answer for all, but they are highly effective for many.

OTHER AGENCIES

In the overall picture it would be hard to imagine our present plight without Alcoholics Anonymous. They have by far the best "track record" of any group in treating the alcoholic, and it is the only facility with a knowledgeable person available for help 24 hours a day, seven days a week. Above all, it is free and thus available to all.

As the title of this paper implies, we pay lip service to the concept that alcoholism is a disease, but it is doubtful if the profession or the public at large actually accepts this concept at a basic level. There is no significant disagreement in the scientific community that alcohol is the most abused drug in the United States. The recently released Shafer Report says so unmistakably. A recent Congressional Task Force reported that^{1,2} that "thus far, we are horrified by the abuse of such drugs as hallucinogens, narcotics, and stimulants by our youth, but we pay little heed to the most abused drug of them all, alcohol." It is fairly generally agreed that at least 10 per cent of all social drinkers will become alcohol abusers, overusers, alcoholic, or whatever term we wish to use. As has been stated so many times before, any other condition that threatened such a significant percentage of our population would be looked upon as a serious epidemic, and all-out measures would be employed to attack it at all levels. We have been unable to do this with the alcohol problem because we are so ambivalent about it. We can't really decide whether the alcoholic has a mental illness that should basically be treated by the psychiatrist,

whether he is a hedonistic neurotic who could "stop it" if he simply had more backbone, or whether he is something that approaches both poles and filling out the middle as well. The discussion seems to get tied up with morality versus immorality, wets versus dries, and "a general tendency to view alcoholism within the context of moral transgression and social deviancy."

The very valuable booklet on Drug Abuse Facilities in Rhode Island just published is excellent and needed, but it applies to a patient population considerably less than the 37,000 in trouble "from the most abused drug." These 37,000 persons have a simple choice; they have only the following facilities to call:

AA	Tel. 331-2047
Cranston Alcohol Counselling	944-2524
Warwick Alcohol Counselling	738-1760
Newport Alcohol Counselling	847-0146
State Division on Alcoholism	331-7400
Hope Council on Alcoholism	421-2027
R. I. Group Health Association	353-4700

As Doctor Edward Blacker, Director of the Massachusetts Alcoholism program, stated: "The drug problem is peanuts compared to the alcohol problem here in Massachusetts and pretty much nationwide."⁸

IDENTIFICATION OF THE ALCOHOLIC

Much of the problem has to do with our cultural inability to de-emphasize alcohol and take it as a matter of fact. "The fixation upon the skid row individual as the model of an alcoholic person has led to an inappropriate view by society of the problems of alcohol abuse and alcoholism . . . largely to protect ourselves against our own confusion and conflicts about our own abuse of alcohol, we have focused on these unfortunate individuals in an attempt to minimize and isolate our own concerns."² Actually 95 to 98 per cent of our alcoholics are married, have families, and are working. As long as we think of the alcoholic as a skid row type, many individuals can take solace in the fact that "Oh, of course, I occasionally drink too much." There are innumerable definitions of alcoholism, but there are two basic components. The first is that the alcoholic has a compulsion about drinking in that he is seemingly unable to stay away from alcohol even though he knows its hazards. But above all he is unable to *stop* once he has started. The other component comprises difficulties which the individual has experienced whether in the personal, social, financial, or health fields. Identifying

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early alcohol related problems when intervention is most likely to be helpful is avoided by the friends of the afflicted individual. They are obviously not recognized by the person himself. The federal programs initiated in the summer of 1972 envision trying to locate the troubled employee regardless of the source of his trouble and then seeking further to determine if alcohol may be the cause (and in some 70 per cent of cases it is). It offers on a statistically significant base an improvement rate of approximately 80 per cent. To facilitate understanding of the problem the American College of Physicians, the American Medical Association, and the National Council on Alcoholism published jointly in the August 1972 issue of the Journal of the AMA a lengthy definition of alcoholism. This summation should be read by all interested in the subject.

We have several problems in Rhode Island. Public drunkenness was deleted from the law as an offense giving rise to criminal or civil penalties. Regrettably the new law became effective without the facilities or funds for implementation. Massachusetts, on the other hand, took a rather longer view of the problem and made its law effective as of July 1, 1973. On the statistical basis that there had been about 60,000 arrests per year for public drunkenness in Massachusetts out of an alcoholic population of 250,000-300,000, it was estimated that approximately 500 new beds would be needed. It was planned to establish detoxification units throughout the state with the greater concentration in the urban areas, particularly Boston. The concept was for a number of relatively small (20 bed) detoxification units each having some direct relationship to a hospital and providing for a projected stay of 5 days or less. Twenty-five such units are planned; in sparsely settled areas of the state they will include a relatively larger geographic area. Thus far the time schedule for establishment is working out satisfactorily relative to the target date of July 1, 1973.

Alcohol programs have never experienced the popularity enjoyed by those directed to other crippling diseases. Some of the latter disorders with high popular appeal but very low incidence attract a yearly average contribution of several dollars per victim, while alcohol attracts a mere 30¢. As a matter of sad reality the Rhode Island affiliate of the National Council on Alcoholism, the Hope Council, has never been in a sufficiently robust state of fiscal health to be able to provide a permanent full-time staff and maintain a consistent pro-

gram of education in the state. It was not until the Hughes Act was passed by Congress that funding of any significance was available, but with the recent cutback in all federal funding many of the existing programs may have a very limited life expectancy.

NATURE OF THE PROBLEM

There is so little that we really *know* about the problem of alcoholism. Recent research has shown for instance that there is indeed an ethnic difference in the reactivity to alcohol. Chinese and Korean³ nationals show evidence of facial flush and gross evidence of inebriation at a significantly lower blood alcohol concentration than do Occidentals. This is not confined to adults (and is possibly predicated on a dietary basis), but thus also demonstrable in the newborn nursery. Also, it has long been a legend in Western Canada that Indians sobered up much more slowly than did whites; studies³ have now shown that this is indeed the case and that the rate of clearance is significantly slower, thus accounting for the persistence of inebriation. There has long been interest in the question of inheritance of alcoholism. Elsewhere in this issue of the Journal appears a review of a symposium held two years ago, but only recently published, on the controversy over Nature versus Nurture in alcoholism. A recent review¹³ indicates that where one of a pair of twins born into an alcoholic family was taken out of this family and raised in a nonalcoholic family, the child still had a fourfold increased probability of becoming an alcoholic victim. The turbulent family life of the child remaining in the alcoholic home only adds to the probability.

The practicing physician finds it difficult to treat alcoholic persons because, unless he has had a particular interest in it, medical school education did not help him much. The drunk in the emergency room was a disaster. Since most alcoholics are accomplished manipulators and liars, they withhold the true nature of their problem from the physician and complain only of nervous tension for which they are given some of the "minor tranquilizers" or barbituates. Unfortunately, it only leads to further exacerbation; most of them take pills as they take booze —a bottle a day. They then become dependent upon the pills and continue the alcohol as well. Alcohol, as has been shown by Stanley Gitlow, is a strange substance in that it is itself an anxiety producer. Since it is an anesthetic agent, constant continued use will help to allay the anxi-

ety until cessation, when the individual develops a severe tremor, possible convulsions, or delirium tremens if not treated. It is agreed that most alcoholics need some sedation in the immediate post-drinking period, but there is a growing tendency to limit this to not more than three days, by which time the critical period will have passed. There is growing question about the effectiveness of detoxification periods of only two or three days. The individual who has been drinking heavily is still so mentally confused for days that no reasonable therapeutic approach can be initiated effectively. For that reason many treatment centers insist on an inpatient stay of a minimum of at least two weeks, sometimes followed by daily outpatient care for two more weeks. One of the prestigious (and expensive) centers in Connecticut insists on an eight week stay.

MANIFESTATIONS

It has been facetiously stated that the alcoholic is the individual who drinks more than we do. The current vogue in the popular press of listing some 10 or 20 questions as guidelines in self diagnosis of alcoholism is misleading, fallacious, and dangerous because the alcoholic has a selective perception of his own acts and in addition has the "blackout" phenomenon by which he truly cannot recall much of the inappropriate behavior which he manifests. Blackouts have nothing to do with "passing out." The individual may make surprisingly good sense and even to a trained observer may appear somewhat intoxicated but not to the point where the next day he will be unable to recall what he did or said to the observer. There are innumerable stories of highly placed responsible executives and officials who suddenly find themselves with used airline tickets to a distant state or country with hotel bills corresponding to the duration of a trip of which they have no recollection. Less exotic but much more common are the episodes seen commonly with alcoholics in which they will have total absence of recall for periods of one to several hours of the day or night before. How much of this is state dependent learning, how much is wilful "forgetting" because of the unacceptable nature of the behavior, and how much a true amnesia is hard to sort out.

Regardless of the etiology, the phenomenon is too well documented and too frequently seen to allow it to be neglected, and for that reason some family or peer confrontation with the alcoholic must be sought. This is particularly emphasized by Vernon Johnson, D.D.⁶ of Minneapolis, the

founder of the Johnson Institute, which has a very effective training program for counsellors in alcohol programs. Johnson suggests that those concerned about the alcoholic meet with the physician or other therapist without the sick person present and literally write down each of the things that the concerned persons have personally observed about the inappropriate behavior. It is important that these things be written down so that they can be clear in everyone's mind and above all, that the individual does not in the stress of a later confrontation have his own particular block in trying out some of these somewhat painful stores. Shortly after this meeting the therapist along with those who have delineated the inappropriate behavior, then meet with the sick person and as Kellerman has said, try to stop this "Merry Go Round Called Denial" or the "carrousel of carousal." Whether it be a business or professional associate, a parent, a wife, or a child, these sessions are painful. They are done in a spirit of love and concern — not with hostility. They are, however, imperative if one is to interrupt the problem before more serious difficulties will arise, whether these be matters of health, family relationships, or legal problems.

Many members of the fellowship of Alcoholics Anonymous feel that the medical profession is remiss when it encourages an alcoholic to "drink moderately." Although physicians whose clinical expertise I trust feel that the concept of "once an alcoholic, always an alcoholic" is largely a matter of fulfilling expectations, in all fairness to Alcoholics Anonymous it must be said that there is no documented study that shows the successful resumption of "social drinking" on the part of an alcoholic person, except in rare instances. Several years ago Davies^{9, 11} was able to find seven individuals in a large practice. However, until a statistically significant sample of alcoholics drinking socially has been documented, there would seem to be considerable risk in assuring the dry alcoholic, however many years of sobriety have elapsed, that those days of alcohol problems are past and that he now can safely drink "socially" like anyone else.

CONCLUSION

The AMA, the American Psychiatric Association, the National Council on Alcoholism, and the American Hospital Association agree that alcoholism is a disease. It is not readily apparent that the concept has strong support in health care delivery systems in Rhode Island in either the public or the private sector.

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Alcohol and Traffic Safety

Measures Required to Awaken Apathetic Public to the Critical Problem

By Laurence A. Senseman, M.D.

The problem of alcohol and traffic accidents is a difficult one in many respects. Much has been written about the subject, and research has been in progress for years to determine the relationship. There is a considerable body of statistical material in the medical literature, and the press devotes much space to discussions of traffic accidents. Radio and television picture the carnage, especially during holiday periods.

State legislatures and the Congress have studied, proposed, and legislated on the subject but with little effect on the incidence of traffic accidents. The liquor industry lavishly advertizes its deadly products and lobbies vigorously against any and all legal restrictions.

In short, while there is much discussion of the subject, very little is being accomplished towards stopping one of the leading causes of death in our nation—highway accidents associated with alcohol.

It has been pointed out¹ that, while the drunken driving toll increases, the states by implication condone driving after drinking by permitting drinking establishments to be located along highways where there is no public transportation. Driving

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after drinking has become our accepted social custom. At least one car in 100 is driven by a driver who has had too much to drink — 20,000 cases a day, 7 million drunken drivers a year.

SCANDINAVIAN EXPERIENCE

As long as the intoxicated driver is socially acceptable, perhaps even amusing, no progress will be made. The experience of the Scandinavian countries is both significant and relevant. In just two decades of tough laws and strict law enforcement drunken driving has become social anathema. It now carries such a stigma as to involve social and even economic obloquy including loss of employment and a feeling of disgrace in the affected families. These policies have reduced drunken driving by almost two-thirds in just 20 years.

UNITED STATES EXPERIENCE

The use of alcohol by drivers and pedestrians leads to some 25,000 deaths and a total of 80,000 crashes in the United States every year.² This carnage can be prevented by designing and building safer cars, improving traffic control and highways, and better policing, but even more successfully through effective laws that eliminate drunken drivers from the highways.

American car buyers in the two year period 1967-1968 were compelled to spend over one

billion dollars for safety devices for their cars, but in the same period did little about the number one cause of highway deaths and injuries—alcohol.³

In a study in Suffolk County in New York State significant levels of alcohol were found in some 70 per cent of fatally injured drivers 20 to 50 years of age and in 25 per cent of older drivers.⁴

GREAT BRITAIN

As a result of the use of the breathalyzer and new legislation to reduce drunken driving in Great Britain, traffic accidents and fatalities have declined sharply in some areas. A 10 per cent decline in the incidence of accidents in London occurred during the first six months of the tests.⁵ There were 42 per cent fewer accidents during the hours from 10 p.m. and 1 a.m. Six other major British cities showed a decline of 69 per cent in the accident rate. The law requires a roadside breathing test. If this proves positive, a blood and urine test for alcohol is mandatory at the police station. The program was publicized with an \$840,000 newspaper, television, and radio campaign, using the slogan "Now you cannot really ask a driver to have another drink."

AMA POLICY

According to Doctor Horace E. Campbell, a past vice chairman of the AMA Committee on the Medical Aspects of Auto Injuries and Deaths, the deleterious effect of even small quantities of alcohol on the driving process is clear and unequivocal. He believes that even the most conservative conclusion that can be drawn from available data would be to the effect that more than half of all fatal crashes involve alcohol as a causative factor. Not only, he believes, is alcohol the largest single factor in traffic fatalities, but also it exceeds all other factors put together. Further, there is an unduly tolerant attitude as to how much alcohol it takes to impair a driver's handling of his automobile. Evidence indicates that as little as 0.05 per cent of alcohol in the serum can produce some impairment in a driver's judgment and physical control.

Campbell recommends the following:

1. Laws forbidding persons from driving with a blood serum alcohol concentration of more than 0.03 per cent.
2. Laws requiring suspected drivers to submit to chemical tests to determine blood alcohol levels.
3. Laws protecting doctors and technicians from damage suits in obtaining this evidence.

4. Special laws to deal with the chronic alcoholic who continues to drive when drunk.

He believes that most of all we must establish a climate of public opinion which is favorable to the enactment of such laws and insists upon impartial enforcement.

In 1967, the writer was appointed by the Governor of Rhode Island to a panel of Medical Consultants to the State Registry of Motor Vehicles. This was a most interesting experience. It was the consultants' duty to advise the Registrar as to the disposition of certain cases where the automobile drivers' licenses had been revoked. While Rhode Island is the smallest state, it has the third highest rate of alcoholism.

The Rhode Island legislature had passed an "implied consent" law in 1967. In 1968 two hundred and ninety-five drivers who refused to take the breathing test received automatic six month suspensions of their drivers' licenses. In addition 394 drivers convicted of driving under the influence of alcohol had their licenses revoked for one year.

In Rhode Island in 1968 there were 22,269 automobile accidents which resulted in 14,565 persons being injured and 142 killed. Sixty-five per cent of the fatal accidents that year involved alcohol. Twenty-one per cent of the drivers were under 21 years of age; 45 per cent 21 to 25; and 26 per cent over 31. Between the years 1960 and 1966, 780 persons were killed and approximately 110,000 injured in some 155,000 accidents.*

Doctor Marvin L. Selzer⁷ reported his study of traffic accidents and alcohol before the American Psychiatric Association. He stressed the fact that most intoxicated drivers involved in grave traffic accidents were chronic alcoholics. Many had had a long history of serious psychopathology "which may have contributed to their accident susceptibility." Fifty-two per cent were paranoid, 28 per cent violent, 28 per cent depressed, and 14 per cent suicidal. Selzer has concluded from his study that "Arrests and penalties for drunk driving or drunk and disorderly offenses do not protect the driving public." He continues: "Suspending or revoking the driver's license is also a dubious gesture. Five of the 72 drivers were driving without a license at the time they caused the fatality, because their license had been previously revoked. Nor does lack of a license prevent a driver from purchasing a car."

RECOMMENDATIONS

The following measures are recommended:
(Concluded on Page 167)

The Hidden Faces of Alcoholism

Alcoholism is a Multisystem Disease and May Masquerade as Medical or Emotional Disorder

By Nathan Sonkin, M.D.

Alcoholism is a ubiquitous disease in our society. The cost of alcoholism to the economy and disruption of family life is enormous. It is a staggering problem in both personal and public health and to group life from a sociological standpoint. It is by far the most common toxic drug in our culture and overshadows other drug abuses in its incidence despite a youth culture which has taken mind distorting drugs and narcotics as a way of life.

Alcoholics are found in all strata of our society. The prevalence of the disease cannot be accurately estimated although it is probably among the most common illnesses in the United States. Statistics of its incidence are unreliable, as many alcoholics are hidden by the privacy of their families, by their doctors, and by their own seclusiveness; many alcoholics are reluctant to admit their problem. Osler once stated that to know syphilis was to know all of medicine. The same statement would also apply equally as well to alcoholism and is more relevant today.

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The purpose of this paper is to alert the physician to the more esoteric clinical manifestations of chronic alcoholism. Unfortunately, the doctor may not be aware of the illness and it is his professional obligation to uncover the camouflage! the exposure can then result in proper diagnosis and treatment. The advanced pathological states resulting from alcoholism such as cirrhosis, chronic pancreatitis, esophagitis, esophageal varices, peripheral neuropathy, gastritis, chronic brain syndrome, alcoholic myocardiopathy, Korsakoff's syndrome with confabulation, hepato-renal syndrome, and Wernicke's encephalopathy are usually recognized. However, many other manifestations of alcoholism are less overt and less obvious. In its advanced state the adverse effects of alcoholism involve practically all major organ systems of the body.

Suspicion is a prerequisite to diagnosis of the hidden alcoholic. Denial of alcoholic intake in both frequency and amount is very common. Alcoholism often wears a mask; it masquerades in the guise of other illnesses at times. It may mimic many diseases and augment the morbidity of many major illnesses. The facade of alcoholism in organic diseases constantly tests the clinician's diagnostic acumen.

Several factors have to be considered in uncovering the hidden alcoholic. Credibility of the patient as to his truthfulness is suspect. Denial of alcoholic intake is so common that it may be considered the norm. When an illness resists the usual effective modalities of treatment, suspect alcoholism. If the diagnosis eludes the physician, consider alcoholism in the differential diagnosis. In some ways the elusive alcoholic is analogous to the depressive neurotic, probably due to the fact that alcoholism is often an external manifestation of the depressive state. It may also be a sign of or concomitant with other complex psychiatric disorders such as inadequate personality, anxiety reaction, schizophrenic reaction and drug addiction or habituation. Chronic alcoholism should be considered as a major disease category because of the multisystem involvement and its extensive physiological and psychological ramifications. It leaves an adverse lasting pathological imprint on both the psyche and metabolic state of the person it affects. The longevity of the chronic alcoholic is thus decreased by several years.

A brief review of the pathology and clinical manifestations in various organ systems will follow. The list will be far from complete but it will illustrate the extensive inroads of alcoholism on the body and the mind. A brief discussion of the sociological implications will also be included:

1. Central Nervous System: Chronic brain Syndrome, delirium tremens, Korsakoff's psychosis, Wernicke's psychosis, acute confusional states and toxic encephalopathy.
2. Peripheral Nervous System: The neuropathy usually involves the lower extremities but may involve the upper extremities as well.
3. Musculo-skeletal System: Generalized motor weakness of the voluntary muscles may occur in association with the peripheral neuritides. This may also be associated with atrophy of the striated muscles. In addition, the alcoholic is subject to accidents with resultant contusions, abrasions, lacerations and fractures.
4. Cardiovascular System: Myocardiopathy with congestive heart failure occurs. There is also an increase in the susceptibility to the development of varicose veins and hemorrhoids.
5. Gastro-intestinal System: Cirrhosis of the liver, gastritis, esophagitis, esophageal varices with bleeding, ulcer diathesis, bleeding peptic ulcer, enterocolitis and pancreatitis are not uncommon.
6. Pulmonary System: There is an increase in the susceptibility to pneumonia and lung ab-

scesses. The pneumonitis may be highly resistant to the more common antibiotics. Alcoholism is frequently associated with heavy cigarette smoking and this leads to an increased incidence of chronic bronchitis and obstructive lung disease.

7. Integument: Increase of incidence of spider angiomas, vasomotor-trophic changes such as decrease of body hair and erythema of the palms. Pellagra may occur as a result of vitamin B deficiency.
8. Metabolic Diseases: Starvation and anorexia cause extensive impairment of nutrition.
9. Genito-urinary System: The decompensated cirrhotic of the unfortunate individual with bleeding esophageal varices may have severe electrolyte disturbances.
10. Mental Status: Many psychological disturbances occur, either by themselves, or concomitant with neurosis or psychosis. These include acute confusional states, disturbance of consciousness, syncopal episodes, convulsive seizure disorders, depressive neuroses, anxiety reactions, personality inadequacies and schizophrenic reactions.
11. Social Implications: Alcoholism disrupts the family, economic security and occupations of its victims. It is an addictive drug, and the alcoholic becomes tolerant to alcohol from a pharmacologic standpoint. It involves all social classes. It causes innumerable personal and family crises. Certain ethnic groups appear to be more prone to alcoholism. Certain occupations such as the competitive, hard-driving executives, painters, bartenders, and military personnel are more vulnerable to alcoholism. In addition, the incidence among females has been increasing during the past two decades. Alcoholism appears to be contagious in the family unit. The children of alcoholic parents are more likely to follow the alcoholic pattern. There is often an inability among alcoholics to handle conflicts and problems. A self-destructive force in alcoholics is sometimes apparent.

Brief summaries of several cases will illustrate both treatment failures and missed diagnoses in the early aspects of these patient's care before the alcoholic background became known to the author, either through persistent questioning, or by admission of family, or neighbors or friends of the patient. Alcoholism in its disguises simulates and

(Continued on Next Page)

produces disease states. This will also be shown in these résumés.

CASE REPORTS

Case No. 1. Peripheral neuritis manifested by burning (paresthesia) of the soles of the feet due to alcoholism. A 62-year-old male complained of burning of the soles of his feet for many months. His physical examination was normal. Chest x-ray examination, electrocardiogram, fasting blood sugar, and glucose tolerance tests were all normal. Subsequently he admitted to drinking large amounts of alcohol for many years.

Case No. 2. Bronchial asthma which became resistant to previous effective therapy because of chronic alcoholism. A 29-year-old man had recurrent severe episodes of bronchial asthma despite intensive treatment which had been effective for the previous six months. His wife eventually disclosed that his excessive periodic alcoholic bouts caused the severe attacks of asthma. He denied this vehemently and was adamant in refusal of psychiatric help. His treatment failed because of associated alcoholism.

Case No. 3. Recurrent acute episodes of hysteria associated with spurious gastric hemorrhage due to alcoholism. A 62-year-old female had recurrent intermittent episodes of weeping, loss of balance, dermatitis of the face, nausea, and severe abdominal pains with complaints of gross vomiting of blood. The physical examination was normal except for a seborrheic dermatitis of the facial area. An upper gastro-intestinal x-ray series was normal. Alcoholic intake was denied. The treatment consisted of an occasional parenteral administration of a tranquilizer during the acute hysterical episodes which usually relieved all symptoms within minutes. Several months later, her husband disclosed that his wife's attacks were always preceded by excessive drinking.

Case No. 4. Syncope due to alcoholism. A 52-year-old man complained of repeated episodes of dizziness followed by fainting. The physical examination revealed some liver enlargement. He initially denied the intake of intoxicating beverages, but later admitted to the consumption of numerous quarts of beer on a daily basis for several years.

Case No. 5. Exacerbation of chronic obstructive lung disease and cor pulmonale due to alcoholism. A 61-year-old male was initially treated intensively for his chronic lung and heart disease with excellent symptomatic relief. Subsequently the treatment failed to relieve his breathlessness. After prolonged questioning, he finally admitted that he only took

his medication on a sporadic basis because of drinking sprees.

Case No. 6. Exacerbation of chronic bronchitis and emphysema due to alcoholism. A 64-year-old complained of a chronic productive cough, generalized weakness, weight loss, and dyspnea on exertion. He was treated with expectorants, broncho-dilators, and intermittent broad spectrum antibiotics without satisfactory relief. He admitted later that he failed to take his medication regularly because of drinking.

Case No. 7. Exacerbation of convulsive seizures in grand mal epilepsy due to intermittent alcoholic bouts. A 32-year-old man was free of convulsive seizures for four years. Suddenly he began to have several seizures each week. He at first denied any failure to take the anticonvulsant medication which had previously kept him free of attacks. Later he admitted to recent heavy drinking and carelessness in taking his medication on a regular basis,

Case No. 8. An accident-prone female had numerous fractures, body contusions, and abrasions due to frequent intoxication. A 39-year-old woman was constantly falling and sustaining numerous contusions, abrasions, and multiple fractures. During a three year period she suffered multiple rib fractures, a lumbar vertebral compression fracture, fracture of the nasal bones, and fracture of the mandible. Although, she persisted in denying drinking, she had a reputation among her neighbors of being a chronic alcoholic.

Case No. 9. Simulation of coronary insufficiency in an alcoholic. A 46-year-old man complained of a crushing substernal chest pain which radiated to the left shoulder and was brought on by exertion. Physical examination was normal. The electrocardiograms were normal both at rest and after exercise. Treatment with nitroglycerin, tranquilizers, and other coronary vasodilators were ineffective. After six months of frustrated therapy the poor results were explained by his wife. She telephoned and said that the chest pains occurred only after heavy drinking bouts and not after physical exertion. There was no chest pain at any other time.

Case No. 10. The association of cerebral concussion and alcoholism. A 69-year-old woman complained of recurrent episodes of syncope and severe headaches subsequent to a fall with a momentary loss of consciousness six months previously. Physical examination was negative. Cerebral ischemia was considered as a diagnosis initially. An echoencephalogram, brain scan, skull x-ray and electro-

cardiogram were all normal. At a later date here husband disclosed that the patient drank regularly and fell down frequently.

Case No. 11. Polyneuritis and alcoholism. A 50-year-old man complained of weakness of all extremities for about a year. Examination revealed impairment of muscle strength and muscle wasting in the four extremities. A toxic neuropathy was suspected. At first alcoholism was denied, but later patient admitted to being an habitual drinker.

Case No. 12. Malnutrition causing cachexia simulating a malignancy due to alcoholism. A 60-year-old female who weighed seventy pounds complained of anorexia and a forty pound weight loss over a year. The physical examination revealed marked generalized body wasting giving an appearance of cachexia. The liver was not palpable. Several liver function tests were all normal. An occult malignancy was suspected at first. Later her husband disclosed the facts of her excessive drinking with loss of appetite. The patient denied alcoholism vigorously at first and then finally admitted it.

Case No. 13. Paroxysmal atrial tachycardia precipitated by alcohol. A 44-year-old man complained of recurrent sudden onsets of chest suffocation, shortness of breath, and palpitation with a rapid heart beat. Physical examination and initial electrocardiogram were normal. A repeat electrocardiogram revealed paroxysmal atrial tachycardia. Later his wife disclosed that the attacks invariably followed a drinking spree.

Case No. 14. Lower leg edema associated with cirrhosis of the liver and varicose veins. A 54-year-old male complained of swelling of his lower legs for several months. He acknowledged his chronic alcoholism. Examination revealed extensive varicosities of both the greater and lesser saphenous veins in both legs. The liver was palpable two fingers breadths below the right costal margin. Alkaline phosphatase was elevated, but several other liver function tests were normal. The edema subsided completely with abstinence of drinking during a two year period.

Case No. 15. Gout diagnosed via alcoholism. A 66-year-old male complained of arthralgia brought on by drinking whiskey. A blood uric acid determination was markedly elevated. The multiple joint pains subsided with treatment by uricosuric agents.

Case No. 16. Syncope and gastroenteritis associated with alcoholism. A 56-year-old man was

brought to the hospital because of a sudden collapse with loss of consciousness. A few hours later he became nauseated, vomited, and had severe diarrhea. No diagnosis could be made despite a complete medical and laboratory evaluation. Alcoholism was denied at first. Several months later he admitted that he was an habitual drinker.

Case No. 17. Chronic fatigue associated with chronic alcoholism. A 60-year-old man complained of constant fatigue; he had no other complaints. Physical examination and liver function tests were normal. Alcoholism was vehemently denied. Subsequently his wife disclosed that he had been an alcoholic for many years.

Case No. 18. Impotency and alcoholism. A 30-year-old man complained of impotence for several months. He admitted to heavy alcoholic consumption for several years. The cessation of drinking subsequently relieved his sexual inadequacy.

Case No. 19. Hyperventilation and alcoholism. A 63-year-old woman complained of dyspnea, chest pain, abdominal cramps, and "blackout" spells. Physical examination was unremarkable. Electrocardiogram, chest x-ray examination, barium enema, gastro-intestinal series, and gallbladder x-ray studies were normal. During the course of her treatment, examinations revealed hyperventilation episodes which responded to tranquilizers. She subsequently acknowledged that the hyperventilation and syncope usually followed excessive drinking.

SUMMARY

The denial of alcoholism does not indicate abstinence. Even with acknowledgement of alcoholism by the patient he will usually minimize its effects. It is a widespread disease which may masquerade in many guises as various medical conditions. If the results of the clinical evaluation and laboratory investigation do not reveal the diagnosis, suspect alcoholism. If response to usually effective treatment is poor, consider alcoholism in the differential diagnosis. Think of alcoholism if a syndrome eludes diagnosis or resists treatment.

Alcoholism is a multisystem disease and may be a manifestation of various emotional disorders such as depression, psychosis, sexual aberration, inadequacy, or personal disorder. Alcoholics are reluctant to admit to their illness and are often difficult to recognize.

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TEN NEW MEDICAL SCHOOLS

In the January 1973 Issue of this JOURNAL Doctor Pierre M. Galletti, Vice President of Brown University for Biology and Medicine, and the ranking officer in the Brown Medical degree program, reviewed the recently published book *Case Histories of Ten New Medical Schools* edited by Vernon W. Lippard, former dean of the Yale Medical School, and Elizabeth Purcell of the Josiah Macy, Jr. Foundation, publishers of the volume. The ten authors are all prominently connected with the schools they describe, such as Glidden L. Brooks (Medical College of Toledo in Ohio), known to Rhode Islanders because of his pioneering work at Brown, Merlin Duval (University of Arizona), familiar to all for his period of national service in the Department of HEW, and the late George James, a potent force in the development of the Mount Sinai School of Medicine.

In reviewing the book, Doctor Galletti stated: "This volume is fascinating reading for those concerned with the education of physicians, and the balance of health care delivery in the years to come. It relates a chapter of our local history . . . in the framework of similar developments in other communities." He added: "For better or worse, the problems are pretty much the same everywhere."

He did not point out that the excellent 51 page chapter on Brown University was written by himself. Much of this well organized history of the Division of Biological and Medical Sciences and the recent decision to institute an M.D. degree program are well known to local readers. A number of his observations are interesting. He has found that in spite of prejudice in academic circles against the

so-called "anti-intellectual climate of the community hospital," it was possible to utilize these valuable resources in Rhode Island without sacrificing the scholarly aspects of medicine. He noted the commitment of the State of Rhode Island to medical education at Brown in order to make up for the normal attrition of 50 physicians a year lost through natural process and as part of a broader undertaking "for the coordination and guidance of all educational and clinical programs in the health sciences." He also hoped that the new program would help alleviate the great dependence of the state in recent years on foreign medical graduates. He stated further that the experience "thus far demonstrates that it is possible to operate a medical program as part of an undergraduate college and a graduate school," and that "the clinical content of medical education can be provided without a university hospital in the traditional sense and that a medical college does not have to own and operate a hospital in order to obtain control of the academic and teaching aspects of its operation."

Doctor Galletti remarked on the early interest of the Rhode Island Medical Society in the establishment of a medical school of the highest quality. This interest is currently manifest in a permanent liaison committee representing the Medical Society and Brown University, and the regular contributions to the pages of this Journal by members of the Medical School administration.

We certainly look forward to a continued cordial relationship between the University on the one hand and this JOURNAL and the Society on the other.

DERMAQUIZ

Conducted by Francesco Ronchese, M.D.



At left, flat warty tumor of a few months duration.

At right, ulcerated area, with raised borders, going on for years.

Answers on Page 167

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GETS THE WATER OUT IN EDEMA

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SPARES POTASSIUM IN BOTH

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

***Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide,' check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides

are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with anti-hypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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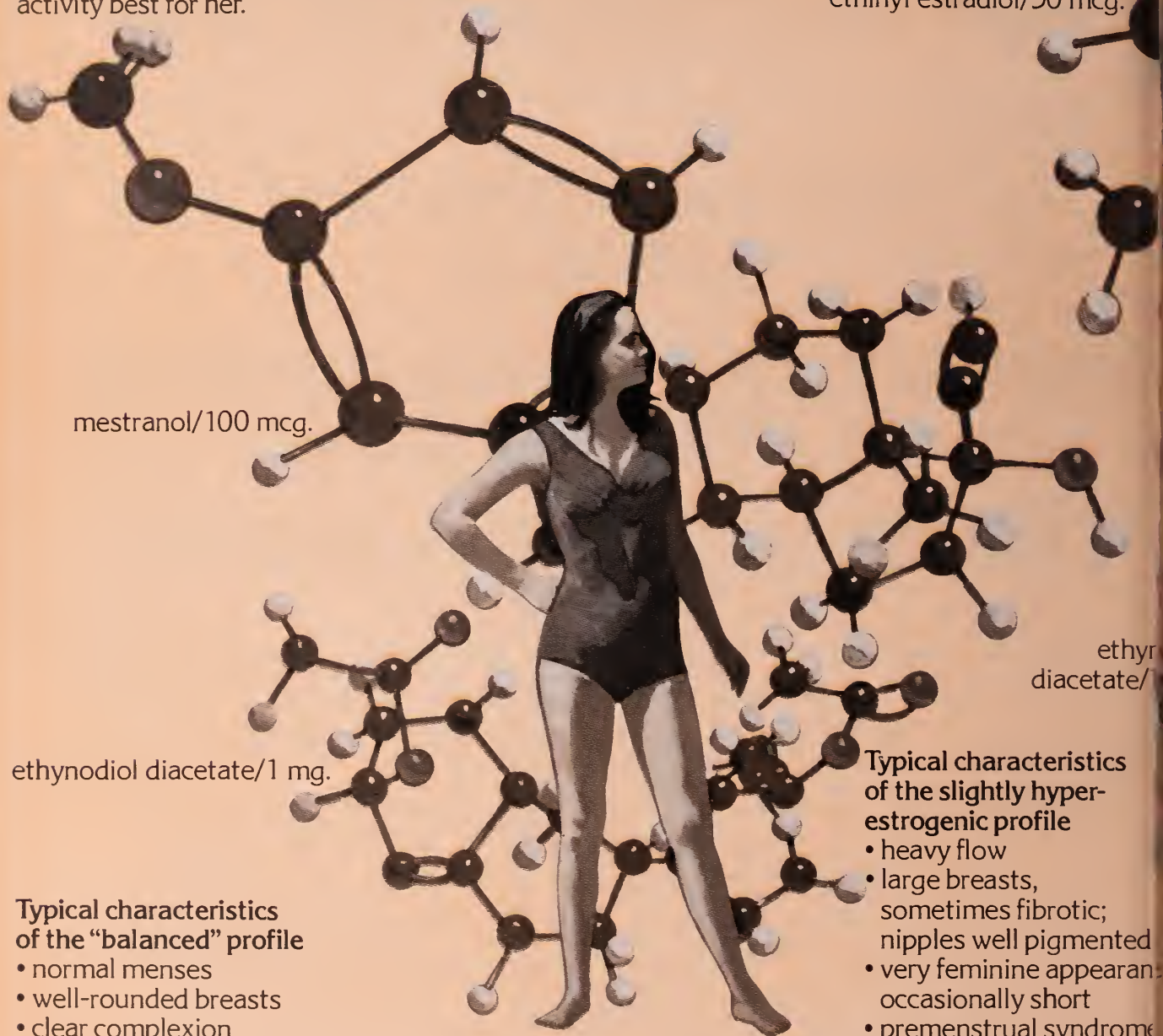
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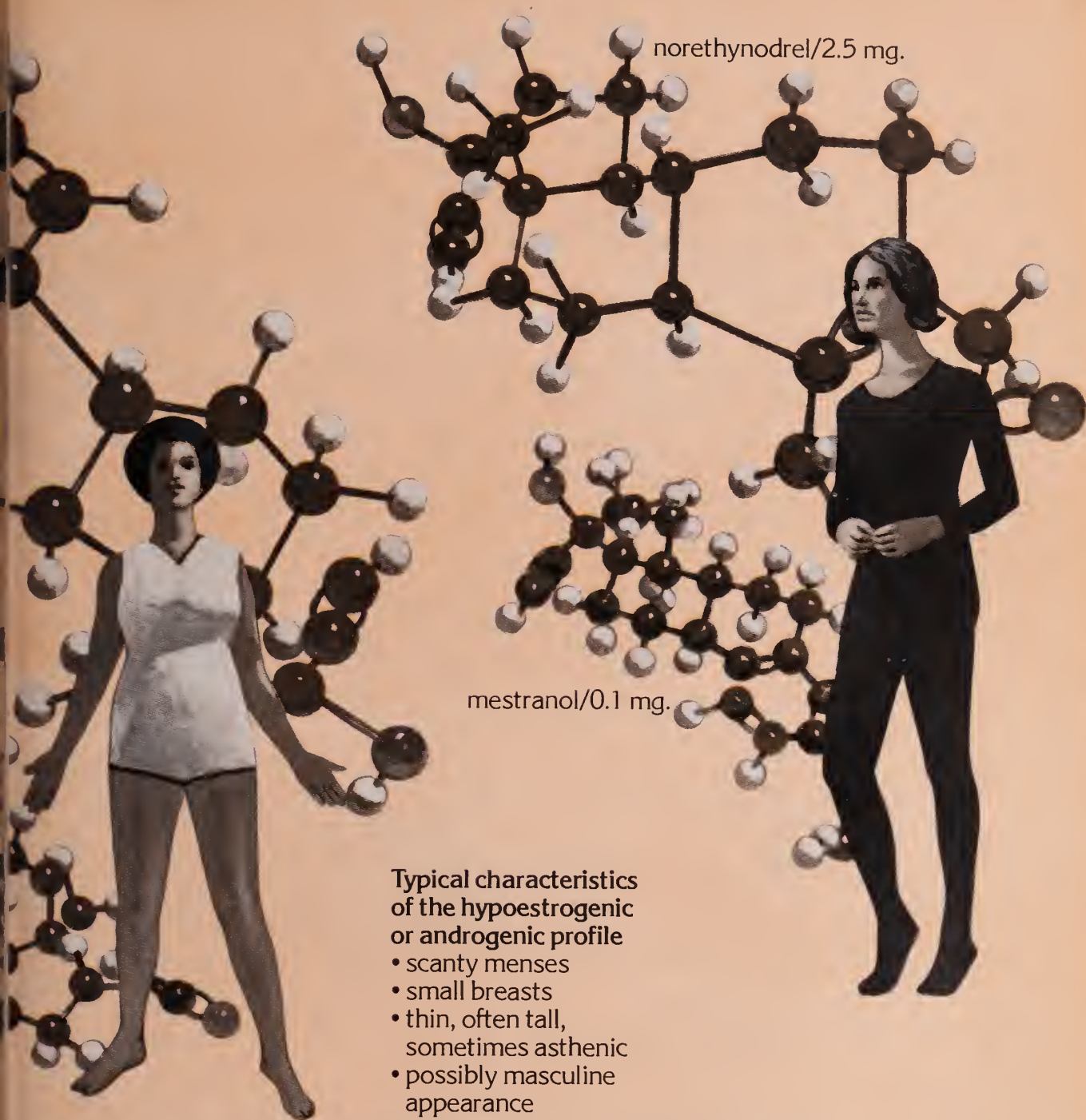
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Typical characteristics of the slightly hyper-estrogenic profile

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**Typical characteristics
of the hypoestrogenic
or androgenic profile**

- scanty menses
- small breasts
- thin, often tall,
sometimes asthenic
- possibly masculine
appearance
- acne, hirsutism
- low sexual motivation
- thin vaginal lining,
tendency to vaginitis
and dyspareunia

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Well suited to most women
when low estrogenic activity
and moderate progestogen
dominance are preferred

This pill has a relatively
weak and unique* progestogen
with inherent estrogenicity.
Clinically, just as in animal
studies, it appears not to
possess antiestrogenic and
androgenic activity.

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and no androgenic activity
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*Of all the progestogens, norethynodrel
most resembles the molecular structure of
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Each white tablet contains:
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Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain¹⁻³ leading to this conclusion, and one⁴ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates¹ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible

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Each white tablet contains:
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influence of prolonged Ovulen or Demulen therapy on pituitary, ovary, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundic migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factor VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-194 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relationship Between Use of Oral Contraceptives and Thromboembolic Disease. Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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The **Special Note**, **Contraindications**, **Warnings**, **Precautions** and **Adverse Reactions** listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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Peripatetics

STANLEY M. ARONSON, a member of the editorial board of this Journal, has been appointed Dean of Clinical Affairs at the Brown University Medical School. Doctor Aronson will continue to discharge his duties as Director of Laboratory Medicine and Pathologist-in-Chief at The Miriam Hospital. He will also continue as Professor of Medical Science. In his new position Doctor Aronson will be responsible for the coordination of programs involving Brown faculty and students in the hospitals affiliated with the Medical program.

* * *

FRANK M. D'ALESSANDRO has recently been elected a member of the American College of Physicians.

JOEL K. WELTMAN, Director of the Division of Infectious Diseases and Allergy, received a grant from Greer Laboratories for the detection of antibodies involved in allergy by means of enzyme amplification.

* * *

ROBERT W. HOPKINS, associate surgeon-in-chief, received a continuation of a previous grant from the National Institute of Health for studies of clinical and experimental shock.

A. A. SAVASTANO was recently elected a member of the Publications Committee of the American Academy Society of Sports Medicine which is a branch of the American Academy of Orthopedic Surgeons. He has also been named on the Committee on the Medical Aspect of Sports of the Foot Division of the American Academy of Orthopedic Surgeons.

* * *

PAUL METCALF, president of the Pawtucket Medical Association, has announced that that County District Society is sponsoring a Medical Explorer Boy Scout Post in an effort to attract youths to a career in medicine. At the opening session ROBERT V. LEWIS, Immediate Past President, briefed the group on the history of medicine and he described the role of the State Medical Society.

* * *

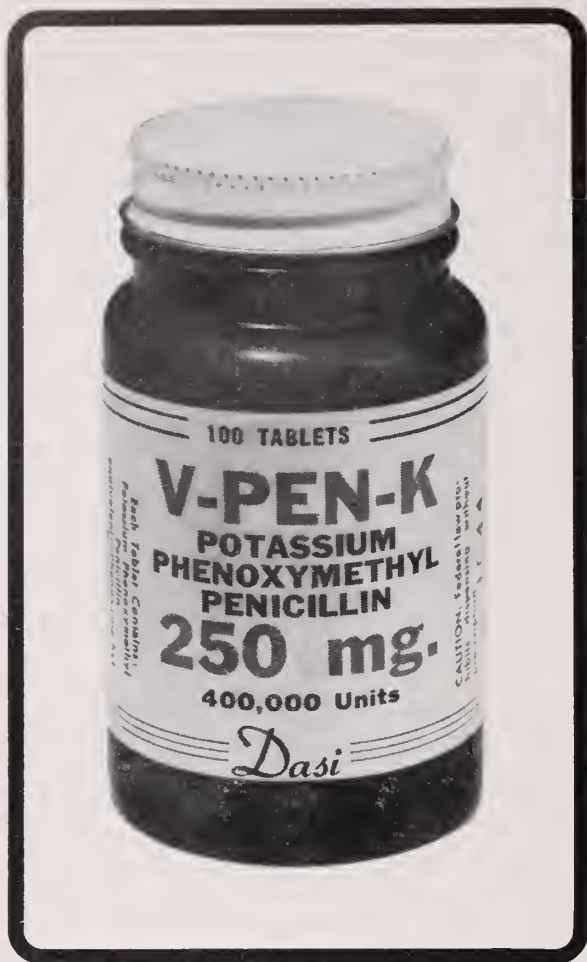
Three physicians are now associated with RICHARD E. LAND, Director of Radiology at St. Joseph's Hospital. They are: SANJAY N. SHAH, GORDON M. GROGAN and RESTITUTOT E. BALUYOT.

(Continued on Next Page)



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CLAY NORRIS WELLS has been named director of the ambulatory care unit at Providence Lying-In Hospital. In his new position Doctor Wells will be in charge of the family planning center, outpatient department, and social service and nutrition centers. He will also help to establish the Clinic for Human Reproduction, Growth and Development planned by the hospital in conjunction with the Brown University Medical School.

* * *

BEN W. FEATHER, medical director of Butler Hospital, and Professor of Medical Science at Brown University, has been appointed Section Leader for Psychiatry and Human Behavior of Brown University's Division of Biological and Medical Sciences. Doctor Feather has also been nominated to the Clinical Projects Research Review Committee of the National Institute of Mental Health, Department of Health, Education, and Welfare, Rockville Maryland. Doctor Feather recently delivered a paper on "Psychodynamic Behavior Therapy" at the 40th annual meeting of the National Association of Private Psychiatric Hospitals, Marco Island, Florida.

* * *

THOMAS PAOLINO, JR. will become a full time psychiatrist on the Butler Hospital staff for five months between one position as base psychiatrist, U.S. Coast Guard Academy, New London, Conn. and another beginning in July as child psychiatry fellow at the Massachusetts Mental Health Center, Boston.

A panel discussion entitled "Relationships of Patients, Families, Doctors, and Hospitals" was held recently at the Temple Beth-El. Panel members included ROBERT P. DAVIS, physician-in-chief at The Miriam Hospital, and Professor of Medical Science at Brown University; MELVIN D. HOFFMAN, President of the Staff Association, and BANICE M. WEBBER, former President of The Miriam Staff Association.

* * *

ALLEN ROSENBERG is the new Medical Director of the Providence Health Centers.

* * *

EUGENE P. RIVERA of St. Joseph's Dermatology Department has been appointed a Clinical Professor in Medicine at Brown University.

⚓ ⚓ ⚓

RHODE ISLAND MEDICAL JOURNAL

ALCOHOL AND TRAFFIC SAFETY

(Concluded from Page 159)

1. A unified traffic safety law providing that the lowest possible blood level be set as a standard. The figure of 0.03 per cent has greatly reduced traffic accidents in such countries as Czechoslovakia, East Germany, and Poland.⁸
2. Massive educational program using all media with maximum possible effectiveness.
3. Universal implied consent laws enforced with adequate police forces, especially during hours of highest incidence of traffic fatalities, 9 p.m. to 1 a.m.
4. Impounding of cars and revoking of licenses of drivers involved in fatal accidents.
5. More severe penalties for these found to be driving under the influence of alcohol and endangering the lives of others on the highways. According to a Gallup Poll in Canada, 43 per cent of those interviewed supported a proposed law providing that a driver be jailed if he consumed more than one drink of an alcoholic beverage.⁹ A similar poll in the United States revealed that 44 per cent favored such a law. In the United States in 1968 there were 102 million automobile drivers and 93 million persons who drank.¹⁰
6. Intensive emphasis in all driver training courses on the problem of drinking drivers.
7. Establishment of alcoholism as a legally reportable disease.
8. Suspension of all roadside liquor advertising.

CONCLUSION

In the drinking driver we are faced with a problem of epidemic proportions. In the next ten years one million United States citizens will die in traffic accidents, and several million more will be seriously injured.

The social drinker and the problem drinker, as well as the chronic alcoholic, all contribute to this highway carnage. Programs are badly needed to educate the public and to detect, restrain, and rehabilitate the alcoholic driver. Something drastic must be done to awaken an apathetic public to this very serious and critical problem.

REFERENCES

- ¹McLaughlin RE: Boston Sunday Globe, 18 Dec 1966
- ²AMA News: Quoting The Washington Post, 16 Sept 1968
- ³Med Tribune, 30 Sept 1968
- ⁴Mod Med, 22 April, 1968
- ⁵AMA News, 8 Jan 1968

⁶Campbell HE: New Med Materia, April 1962

⁷Selzer ML: The alcoholic driver: Myth or menace? Psychiat Opinion 6 (3), June 1969

⁸Med Tribune, 7 Feb 1966

⁹AMA News, 18 March 1968

¹⁰Pawtucket (R.I.) Times, 15 June 1968



DERMAQUIZ ANSWER

(See Page 164)

Left, Papilloma (benign).

Right, Carcinoma.

NEW ENGLAND SCHOOL OF ALCOHOL STUDIES

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(Concluded from Page 157)

REFERENCES

- ¹Recent Advances in Studies of Alcoholism. An Interdisciplinary Symposium. Sponsored by National Center for prevention and Control of Alcoholism, National Institute of Mental Health. Edited by NK Mello, JH Mendelson. Publication No. (HSM) 71-9045, 1971. U.S. Government Printing Office, 1972. P. V.
- ²First Special Report to the U.S. Congress on Alcohol and Health. Edited by M Keller, SS Rosenberg. DHEW Publication No. (HSM) 72-9099, 1971, U.S. Government Printing Office. P. VI.
- ³Wolff PH: Ethnic difference in alcohol sensitivity. *Science* 175:449-50, 28 Jan 72
- ⁴Fenna D, et al.: Ethanol metabolism in various racial groups. *Can Med Assoc J* 105:472-5, 4 Sept 71
- ⁵Pert CB, Snyder SH: Opiate receptor: demonstration in nervous tissue. *Science* 197:1011-4, 9 Mar 73
- ⁶Johnson VE: Why do Alcoholics Suffer So Long? In press
- ⁷American Hospital Association: Who Cares About an Alcoholism Program in a General Hospital. Chicago, 1972. P. 9
- ⁸Blacker E: Remarks, March 7, 1973. Seminar on Alcohol and Drugs, Boston
- ⁹Davies DL: Drinking in recovered alcohol addicts. *Quart J Stud Alcohol* 23:94-101, Mar 62
- ¹⁰Normal drinking in recovered alcohol addicts. Comment on the article by D.L. Davies *Quart J Stud Alcohol* 24:109-21, Mar 63
- ¹¹Davies DL: Normal Drinking in recovered alcohol addicts. Comment on the article by D.L. Davies. *Quart J Stud Alcohol* 24:321-32, Jun 63
- ¹²Mann GA: An alcoholic treatment center in a community general hospital: Minneapolis-Saint Paul. *Hosp Progr* 50:125-8, Oct 69
- ¹³Goodwin DW, et al. Alcohol problems in adoptees raised apart from alcoholic biological parents. *Arch Gen Psychiatry* 28:238-43, Feb 73



ONE SENTENCE ESSAY

A good plate of chicken soup has cured more ills than penicillin.

. . . Anon.

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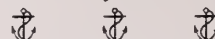
SLIPPERY WHEN WET

(Concluded from Page 152)

science or, worse, by camouflaging it as goal-directed science. All knowledge may find applications; but the pursuit of knowledge does not need such justification.

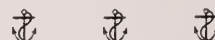
The sciences are not only or even primarily the handmaidens of technology. Like philosophy and the arts, they are integral and essential components of the intellectual enterprise of mankind. They are part of what makes man human, the source of knowledge of himself and of the world around him. Society may at some times support one or another branch of science for the practical benefit that it expects of it. Or it may even, as has been the case recently in the United States, support the whole enterprise of science on the assumption that by-and-large the results will be beneficial. And then, at other times, this support may be questioned for the various reasons I have discussed. But, as long as there will be young people who wonder why plants flower in spring, how an egg gives rise to a bird, why a radioactive nucleus emits radiation — or how all these things came to be in the first place, or where it all will end — science will continue to advance, supported or not.

It may be, however, that a sound foundation to the continuous advance of science may require from scientists a new and heightened sensitivity to the aspirations of humanity in its struggle toward a better life. It may require the exercise of an active sense of responsibility for involvement in the social aspects of science. This may be the best way for us scientists to legitimize the pursuit of our chosen enterprise.



The itch is a terrible malady. I contacted it at the siege of Toulon. Two gunners who had it were killed in front of me, and I was covered with their blood. I was not properly treated, and I continued to suffer from it while in Italy and in Egypt. When I came back from the East, Corvisart cured me by putting three blisters on my chest; this brought on a salutary crisis. Before that time I had been thin and sallow; since then I have always had good health.

From Talks of Napoleon at St. Helena, trans. Elizabeth W. Latimer, A. C. McClurg & Co. 1904.



ONE SENTENCE ESSAY

Doctors are trained to be expert skeptics.

. . . George Himler, Resident, N. Y. State Medical Society.

RHODE ISLAND MEDICAL JOURNAL

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Warnings: Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water

thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

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Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruption, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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May 1973
Vol. 56, No. 5

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Woonsocket Hospital 1888



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Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
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While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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Rhode Island Medical Journal

MAY, 1973

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COVER: The Woonsocket Hospital is celebrating on May 29, 1973 its 100th anniversary with a week long series of professional and special events. The cover shows the original cottage hospital that was constructed in 1888, fifteen years after the hospital was founded. The photograph was taken between 1888 and 1904. Photo courtesy The Woonsocket Hospital.

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Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hematology, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, giving those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the maximum possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Sublingual capsules for tablets if dyspeptic symptoms. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions, symptoms of blood dyscrasia, dyspepsia, epigastric symptoms of anemia, black or tarry stools or other signs of intestinal ulceration or hemorrhage, skin rashes, significant weight gain or edema. A one-week trial is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Contraindications: Acute gouty arthritis, rheumatoid arthritis, ankylosing spondylitis.

Indications: Children 14 years or less, senile parosmia, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; salivary gland enlargement due to the disease; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, extent of concomitant diseases, and concurrent potent therapy affect incidence of toxic reactions. Carefully select and observe the individual patient, especially the elderly (forty years and over) who have increased susceptibility to the toxicity of the drug. Use the minimum effective dosage. Weigh initially unpredictable reactions against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias,

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Each capsule contains:
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100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

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including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonamides, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis,

epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement (B)98-146-070-G

Serious side effects do occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions.

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

What should a medication for sleep be expected to provide?



Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with

Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

Sleep with consistency

Dalmane (flurazepam HCl) has been shown to be consistently effective even during consecutive nights of administration. Thus there is little likelihood for the need to increase dosage to maintain therapeutic effect.

Dalmane is in a class by itself. Not a narcotic, barbiturate or methaqualone, Dalmane is the only available benzodiazepine specifically indicated for insomnia.

Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights. In most instances when adverse reactions were reported they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity agent proved effective and relatively safe for relief of insomnia.

DALMANE®

(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage

(15 mg may suffice in some patients).

One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.

ROCHE

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Nutley, New Jersey 07110

depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during prolonged therapy. Observe usual precautions in presence of impaired renal or liver function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia, falling have occurred, particularly in elderly or debilitated patients. Severe drowsiness, lethargy, disorientation and, probably indicative of drug intolerance or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech,

confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. **Adults:** 30 mg usual dosage; 15 mg may suffice in some patients. **Elderly or debilitated patients:** 15 mg initially until response is determined.

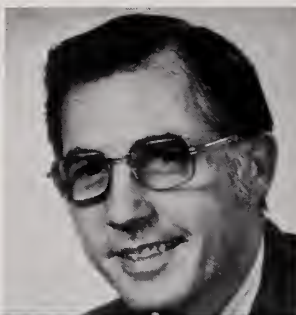
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Opinion & Dialogue

"Prescription drugs – who should determine the maker?"

Dispenser of Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine..."

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will rely on expert knowledge of no more than 5

ould be an obligation of medical practice...

"Medical societies ought to continue continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illnesses. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

Cost of Drugs

Insurance rates and hospital charges are only two factors in health

30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that the courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

Summary

In short, what the American Pharmaceutical Association advo-

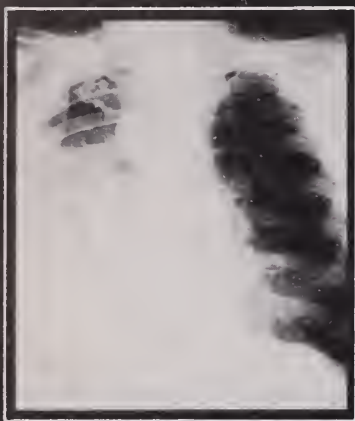
cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

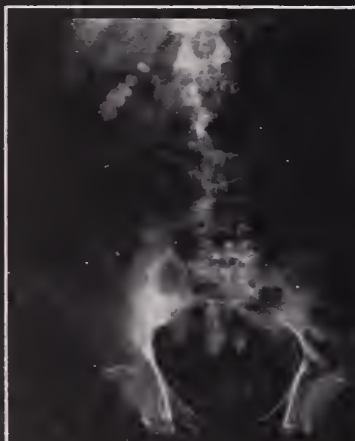


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BROWN UNIVERSITY
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MEDICAL EVENTS CALENDAR

SATURDAY, June 9, 1973

INTERRELATIONSHIPS OF CARDIO-RESPIRATORY PHYSIOLOGY
Joseph M. Civetta, M.D.
Departments of Surgery and Anesthesiology Uni-
versity of Miami School of Medicine, Miami, Florida

Rhode Island Hospital
George Auditorium
10 a.m.

SATURDAY, June 16, 1973

**RECENT DEVELOPMENTS IN INTESTINAL ABSORPTION AND
MALABSORPTION**
Irwin H. Rosenberg, M.D.
Associate Professor, Department of Medicine, The
University of Chicago, The Division of Biological
Sciences, and The Pritzker School of Medicine

Rhode Island Hospital
George Auditorium
10 a.m.

SATURDAY, June 23, 1973

THE OPERATIVE TREATMENT OF CHRONIC ACTIVE PANCREATITIS
Mark A. Hayes, M.D.
Professor of Surgery, Yale University, School of
Medicine, New Haven, Connecticut

Rhode Island Hospital
George Auditorium
10 a.m.



An Act Of Faith

We were so touched by the following press release from Brown University that we are reprinting it in full not only for the record but that you may have the opportunity to read it in case you missed it at the time of publication early in May. We consider it not only an act of gratitude but a poignant expression of faith in the community and in the future of the Medical School at Brown University:

The gratitude of Brown University medical students for Rhode Island community support of the Brown medical school has led to a unique gift worth its weight in life.

Brown medical students working under the Brown University Medical Education Program have sponsored a blood drive which will provide free blood for the Rhode Island community. One of the chief organizers of this drive is William Kaye, a Cranston, Rhode Island native who is in his fourth year at Brown and in his first year of medical school.

Intense and totally dedicated to the project, Kaye explains that the medical students were motivated to give blood for two reasons. One was to show their appreciation and express thanks to the community for supporting the medical program at Brown. The other reason was to demonstrate, through an essential gift, an expression of Brown's responsibility to the community.

Anyone, not just medical or other students, may donate blood. Kaye said the group has received pledges from a complete cross section of the campus community. The majority of the donors have been medical students, he thinks, because they have been the easiest people to inform of the program. Kaye said the student blood drive started April 24 and will extend through May 18. He hopes it will not be a one-shot effort.

Kaye said that results have been good so far, with about 250 pledges to date and about half of those pledged actually giving blood. "I never expected to get 100 per cent results," he admits, explaining there are many factors that may make a person ineligible to give blood, including a history of malaria, anemia, hypertension, colds, infections, or if a person is currently on antibiotics.

Miriam Hospital was chosen as the site to collect and store the blood for several reasons. It is close to and affiliated with Brown University, and it is a member of the Rhode Island Community

Association Blood Bank, along with eight other hospitals.

Distribution of blood to any of these other eight Rhode Island hospitals is under the direction of Rhode Island Community Association Blood Bank. This organization, under the direction of Herbert C. Lichtman, M.D., who is a professor of medical science at Brown and serves on the pathology staff of Miriam Hospital, is composed mostly of Brown University medical faculty members.

Should any of the nine member hospitals be out of a certain type of blood, they can obtain the blood within minutes from storage facilities at Miriam. Because the blood is donated to the community, Doctor Lichtman says, patients at the hospital would not pay for it, although relatives may be asked to donate so that supplies would not diminish.

The idea of the donations started when student Bill Kaye brought the idea to the attention of Stanley M. Aronson, M.D., dean for medical affairs at Brown. Kaye is assisted in the drive by Ingrid Rodi, a freshman in Brown's medical program who is from Brazil; and Larry Solin, a sophomore in the medical program. The three students share all the tasks necessary to make the blood donation program a success. Buses provided through the courtesy of the Brown Youth Guidance are used to transport donors to Miriam Hospital and back to the Brown campus.

How does the actual blood drive work? The first thing students did was to gather a list of donors, which they sent to Miriam Hospital. The hospital then assigned an appointment to each student. Because of the enthusiastic response, the donors had to be divided into eight groups, ranging from 20 to 52 students in each group.

Kaye said the blood donations this year will end May 18 and start again in the fall. "We will continue to donate as long as there is a need for blood," he said. "If any of the hospitals need blood at any other time, they have the students' addresses and they are free to contact us any time in an emergency.

"Since we consider ourselves to be members of the community, as well as members of the Brown University Medical Education Program, we do not want our education process at Brown to be isolated from the rest of the community," Kaye concluded. "We want to participate actively in those events which are relative to the needs of our community."





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

Student Admissions To The Brown Medical Program

Twenty-one Rhode Island practicing physicians have helped this spring in selecting students for the Brown Medical Program. In response to an appeal by the permanent Liaison Committee of the University and the Rhode Island Medical Society, these practitioners formed a Board of Interviewers, to which prospective candidates were assigned for individual interviews. The purpose of these encounters was not to test academic qualifications, which are abundantly documented by the college record, premedical advisor evaluations, and the Medical College Admission Test. Rather, the interviews tended to focus on the human qualities of the individual, his ability to relate, to work under stress, and to persevere. Some of the interviews took place on the Brown campus, some in the physician's offices, not only in the Providence area, but also as far away as Newport.

Selecting a limited number of medical students from a pool in which the qualified candidates outnumber the available openings is no easy task. Certainly the Brown Admission Committee, a body which includes advanced medical students as well as faculty, is not infallible in his choices. Nor is the perspective gained during an hour of conversation between a physician and a student always illuminating. Nevertheless, all practitioners who participated in the interview process this spring have expressed the desire to serve again next year. They found the experience rewarding. It provided them with an opportunity to take a closer look at the young people who aspire to become physicians. It brought students in an environment which was often completely new for them: that of the practitioner's office. From the Medical Program viewpoint, the insight provided in the interviewers' reports was invaluable.

The review process served equally for the applicants who had entered the Brown Medical Program as college freshmen three years before, and for the candidates from other colleges. Admissions for the fall of 1973 are now completed: the net result is a class of 60 first-year medical students, 39 of whom are currently juniors in the Brown MMS program, and 21 selected from a pool of about 100 applications from other college programs. Fifteen students, or 25 per cent of the class, are Rhode Island residents, and 18, or 30 per cent, are women.

Brown will also inaugurate in 1973-74 the third year of medical school. This required another admissions process to bring the class to its full complement of 60 students. This number was achieved in the following manner: 12 students were accepted on early decision in January, 1973, and permitted to start immediately their clerkships in Medicine and Surgery. These students will be joined in July, 1973, by 36 students who will have completed the first two years of medical school at Brown, and 12 transfer students from other medical schools. (Rutgers, New York Medical College, University of Nevada, Downstate Medical Center, University of South Dakota, and University of Southern California.)

Altogether there will be next fall 175 medical students in the three operational years of the M.D. program, 3 of them Rhode Islanders, and 43 women. The first 60 Brown M.D.'s will graduate in June, 1975.

PIERRE M. GALLETTI, M.D., Ph.D.
Vice President
(Biology and Medicine)

Continuing Medical Education For Physicians

A Seminar of Continuing Education: "Life Saving Measures for the Critically Injured". The Seminar will be held at the University of Vermont College of Medicine, Burlington, Vermont, July 9-13, 1973, sponsored by the American College of Surgeons, Committee on Trauma, and the Department of Surgery, the University of Vermont College of Medicine.

Curriculum Content:

- Causes of death soon after injury
- Delayed causes of death after injury
- Assessment of the critically injured patient
- Shock
- Wound management
- Central nervous system trauma
- Thoracic injuries
- Abdominal injuries
- Genital-urinary injuries
- Fractures and dislocations
- Arterial injuries in the extremities
- Burns
- General problems caused by trauma

For registration materials and further information contact:

John H. Davis, M.D.
Chairman, Department of Surgery
University of Vermont College of Medicine
Burlington, Vermont 05401

RADIOLOGISTS MEETING

Dr. Milton Elkin, professor and chairman of the Department of Radiology at the Albert Einstein Medical Center in New York, will address the Radiological Society of Rhode Island at its meeting at the Rhode Island Country Club on Wednesday, June 6. His topic will be "Continuing Education in Radiology."

A golf tournament in the afternoon will be followed by a cocktail hour starting at 5:30 p.m.; then dinner, and the address by Doctor Elkin. Physicians interested in attending the meeting, and participating in the events planned, should contact Dr. Daniel J. Hanson, secretary of the Radiological Society of Rhode Island, at Rhode Island Hospital.

Book Reviews

DINNER AT MAGNY'S by Robert Baldick. London, Victor Gollancz, Ltd., 1971.

"Club: a gathering of congenial fellows under certain circumstances" — Samuel Johnson

Conversation amongst the "greats" in any age or in any place is much more likely to be trivial, and devoted to the concerns of the average human being, than to an exchange of eternal truths and high sentiments. This was certainly true from 1862 to 1872 when the "two cultures" met rather regularly at a long since demolished and forgotten restaurant called Magny's in Paris. It all began at the instigation of a very famous Parisian physician, Francois Auguste Veyne. Veyne was affectionately called the "physician to Bohemia." Sainte-Beuve, without a doubt the world's greatest literary critic, had studied medicine before choosing journalism, and continued mutual interest in medicine with his personal physician and friend, Veyne.

The "club" came about thus: Gavarni, the great French illustrator, was held in great esteem by Sainte-Beuve, who had praised him often in his critical writings. Gavarni had become depressed, withdrawn, and somewhat of a recluse. Veyne, the good physician, arranged the first of the Magny's dinners to entertain Gavarni and have him meet Sainte-Beuve whose admiration it was hoped would have a salutary effect on Gavarni's deep depression. Out of this simple beginning, conceived as a simple act of charity, began weekly dinner meetings of some of the most powerful intellectuals of French and Western culture during the latter half of the 19th century. There was Claude Bernard, friend of Veyne's, author of one of the most famous of all physiological concepts. There was the great Ernest Renan, trained as a Jesuit, who wrote the first humanizing and factual biography of the life of Jesus. Although Renan was one of the most distinguished of Oriental scholars, his "Romance of the Celtic Poetry" should be required reading on the Arthurian Legend for all who have enjoyed the musical, "Camelot." There was the anatomist and histologist, Charles Robin; George Sand, mistress Chopin and Musset, added a female touch. The list of diners include the brothers Goncourt, Jules and Edmond; the former's death from syphilis occurred in the course of the twenty years of the Magny dinners. His disease was freely discussed. Gustave Flaubert, whose world famous "Madame Bovary"

led to one of the earlier and more famous trials on obscenity, added his bit to the dinners. The kind, gentle Ivan Turgenev of the Tolstoi-Dostoevski school of Russian writers completed the group.

In Boswell's *LIFE OF JOHNSON* we find all the important things which Samuel Johnson said at that most famous of literary club dinners at the "Turk's Head." We also know much of the trivia

(Continued on Next Page)

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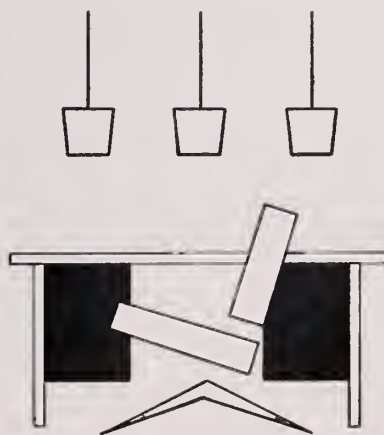
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which was discussed. In the important editings of Samuel Johnson by Eric Partridge, he reports in his "Shakespeare Bawdy," "much was more frankly, simply, and more boldly said" than appears in Boswell. Earlier in this review we said that the gems of wisdom put forth by the greats in their conversations are rare. The conversations of the diners at Magny's were little different than any tavern talk, but with deeper and richer associations; with more logic in exposition; more color in description and more profound observations. But fundamentally all conversation is sex, politics, and religion, in that order. The Goncourt brothers, Edmond and Jules, did for the dinners at Magny's what Boswell did for the Literary Club. They reported verbatim the conversations in their journals which were published after the death of the surviving member.

Robert Baldick, the author of *DINNER AT MAGNY'S*, is a fellow of Pembroke College, Oxford, and one of the world's authorities on 19th century French literature; this has permitted him to write *DINNER AT MAGNY'S* almost exclusively in the form of conversation. Every sentiment,

every idea and opinion has a factual basis in the writings, letters, or journals of the men to whom they are attributed. The minimum of literary license has been taken in reconstructing conversation: where license has been taken, Professor Baldick always gives indication. The skill of the author is manifest in his fulfillment of the concept of the work which was to entertain as well as to enlighten; to please as well as to instruct. Therefore it is not overdone.

He has confined himself to six typical diners covering the ten years from 1862 to 1872. He begins with a foreword and ends with an epilogue. His chapters are short and never tedious. It is a difficult task, and one that only a person such as Baldick could carry out, in assuming the character and the personality of each of the diners who gives utterance. He does this effectively; but Baldick lacks the skill of the dramatist with the result that one does not truly feel the character of the men from their utterances. It would appear to this reviewer that the individual style of each of the diners has not been conveyed in the translation of their conversations; there is a sameness of expression; but not sameness of thoughts. His use of the word "neurosis" raised doubts in my mind about its use in conversation prior to the advent of Freud; that, I believe, is an anachronism. The frequent use of the conversational four letter word for sexual intercourse seemed unnatural and awkward in the conversations in which it was placed. In this reviewer's limited experience with the bawdy, there are equally poignant synonyms with as much impact; they would have seemed more natural in the mouths of some of the speakers. That all the diners should have used the same elemental word rather than variations struck me as unusual. Baldick says in the words of Sainte-Beuve that, if you write, you are subject to criticism. So criticize I will.

In this long-demolished restaurant in the Rue Mazet, Modeste Magny created some famous and lasting dishes — Purée Magny, tournedos Rossini (prepared at the direction of the great Italian composer), and Chateau-Briand. His restaurant served in addition to good food and superb conversation. The conversation was unrestrained, uninhibited, and dealt forthrightly with the private and public lives of the diners. Much of contemporary life of the latter half of the 19th century is preserved. Mores, sexual and social; the attitude of the Avant Garde toward the Third Empire and the

(Continued on Page 176)

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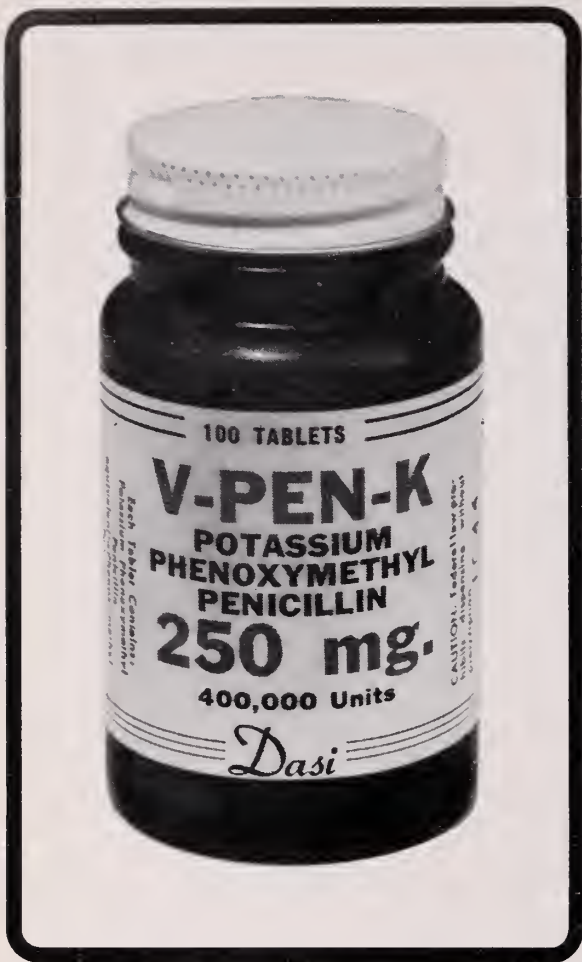
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BOOK REVIEWS

(Continued From Page 174)

Third Republic; reflections on science and medicine; modern and classical literary criticism; all these are all richly garnished in the authentic words of this rare assembly of the diners at Magny's. Why men and women love to "kiss and tell" is somewhat of a mystery. Cassanova was not the first; nor Frank Harris the last. The literary great love to confess and brag of their prowess; the public loves to read true confessions. "Dinner at Magny's" proves both.

ROBERT V. LEWIS, M.D.

* * *

THE PATHOLOGY OF LEADERSHIP. A History of the Effects of Disease on 20th Century Leaders by Hugh L'Etang. New York, Hawthorn Books, Inc., 1970. \$6.95.

"The heroes of literary as well as civil history have been very often no less remarkable for what they have suffered, than for what they have achieved; and volumes have been written only to enumerate the miseries of the learned, and relate their unhappy lives, and untimely deaths"—Samuel Johnson.

Hugh L'Etang has rather superficially, to this reviewer's mind, written about the diseases and deaths of a collection of 20th century leaders including Roosevelt, Eisenhower, Churchill, LBJ, JFK, Lloyd George, Sir Anthony Eden, Sir Stafford Cripps, Neville Chamberlain, Stalin, Mussolini, and Hitler. Given the premise that the political or military leader achieves success in his fifties or early sixties, one could predict the hypertension, the vascular disease, the malignancies and the degenerative processes to which they are all heir. This reviewer is not the least bit impressed, startled, or intrigued by the superficial implications or interpretations of the diseases that these leaders suffered. The superficiality of L'Etang's medical knowledge and his lapses at times to less than average science reporting is unfortunate. The case of JFK is particularly striking in illustrating this defect. The facts are that President Kennedy had Addison's disease. It is equally true that there are profound psychological effects including euphoria and personality changes from overdoses of steroids. Generally speaking on a broad clinical basis, however, the restitution of an Addisonian to a physiologic state does not cause sufficient deviation from normal to warrant some of the conclusions drawn by the author, or the wide speculation concerning effect of

(Continued on Page 177)

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Warnings: Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water

thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

Adverse Reactions: Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

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BOOK REVIEWS

(Continued From Page 176)

the disease on his performance. The author manifests an almost medieval attitude toward syphilis and a subconscious preoccupation with it in ascribing syphilis to both Hitler and Mussolini. There is no in-depth study of whether or not either of these dictators had the disease; there is rather the hypothesis that they did, and then sweeping generalizations as to the effects of the disease on the men and the course of history. This does not occupy a major part of the book, but is illustrative rather of a somewhat unsophisticated integration of the effects of pathophysiology on behavior.

If this reviewer's premise that all are equally susceptible to disease is valid, it follows that substitution of other leaders for the ones that Mr. L'Etang has chosen to describe would probably reveal similar diseases, especially the degenerative ones. This then raises the generic question of the criteria one uses in assessing the physical capabilities of a national leader. It has been generally throughout the ages that judgment increases with years up to the point of actual cerebral dysfunction. Under these circumstances people will turn to older, previously proven leaders intuitively and instinctively for leadership and judgment in times of crises. Degenerative disease in leaders thus is inescapable. The most simplistic approach would be to choose only men under the age of forty for great office. But Benjamin Franklin described forty as an age of action only; the age of judgment lay beyond that. Therein lies the dilemma. Should there be a physical examination or a mental examination to determine the fitness of national leaders? This is absurd and impossible. A leader is hardly a leader if he could not manipulate even the most rigid criteria of his selection on medical grounds. A dictator can completely abolish any regulations that a society might choose to impose upon him. The alternative mechanism is to choose methods of relieving command and leadership when it is proved to be incompetent. Actually, if one should read "The Pathology of Leadership" with this viewpoint in mind, it is replete with illustrations. The leader's peers find mechanisms to do this. In the last analysis the judgment of political peers on capacity to perform is as reliable as the opinion of one physician or a staff of physicians limited in their scope to their knowledge of physiology. It is the total and overall performance of the leader which counts; the physician is quite a novice in political matters.

(Concluded on Next Page)

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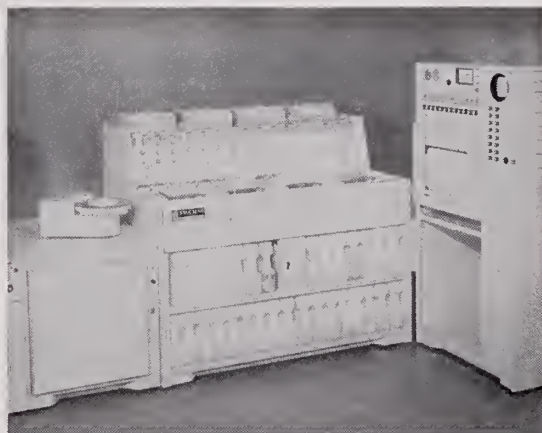
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What, then, is the role of a physician and his responsibility to political leaders? What is his responsibility to the public? This reviewer holds that physicians, either singly or collectively on a board, could not in any conceivable way be the final judge of the capabilities of a leader other than to assess his functional capacity. This reviewer also holds that it should be in the finest tradition of the physician that he (1) maintain trust and his role of confidant with respect to his patient; (2) that he be forthright, bold, and honest in apprising the leader of his impairments, and the risks that these impairments hold not only for the leader but for his people. (3) It is completely within the realm of ethics that non-specifics and specifics may be discussed with the leader's family or next-of-kin. (4) In indirect ways, with subtlety and without betraying the trust in the doctor-patient relationship, the doctor's influence should be felt in leadership circles. The command decision, however, to replace or to limit the activities of a leader still remains political and not medical. As inaccurate as the political process is, the art of prognostication is not sufficiently refined to permit an omniscient attitude on the part of a physician.

L'Etang's first chapter is "Should a doctor ever tell?" Much of this controversy was engendered by the revelation by Lord Moran of Churchill's medical history. This reviewer firmly holds that the privacy of a public leader and his medical history is lost at the time of death. As sacred as the trust is to a patient during his life, the trust to mankind and humanity is greater after his death. This is a long respected tradition. No member of the French royal family was ever allowed to be buried without an autopsy. There is a common feeling among enlightened people from the beginning of time that the more important the person, the more important it is to know all about his physiology, his diseases, and the things that caused his death. In this respect I would hold that it is one of the obligations of leadership that medical history should be revealed at the time of death. Those national leaders who were not autopsied leave a void and a confusion which this reviewer, L'Etang, and all humanity are entitled to have clarified.

This is not a profound book. It is descriptive and encyclopedic rather than profound and illuminating; but it does raise issues to which this reviewer had added his words, and will evoke some words and feeling of any physician who feels his social responsibilities.

ROBERT V. LEWIS, M.D.

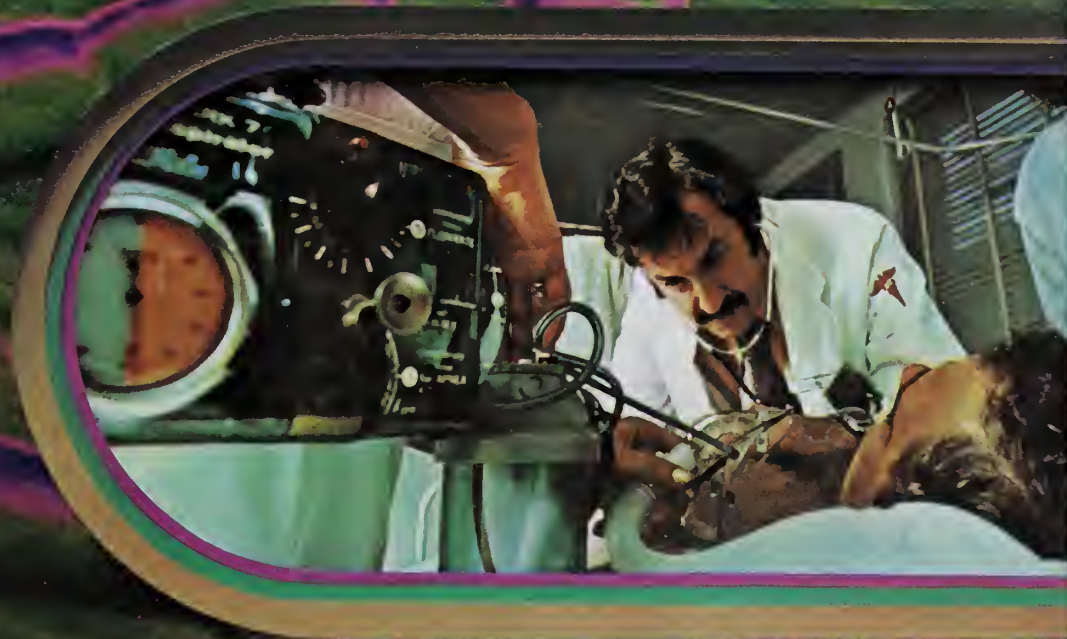


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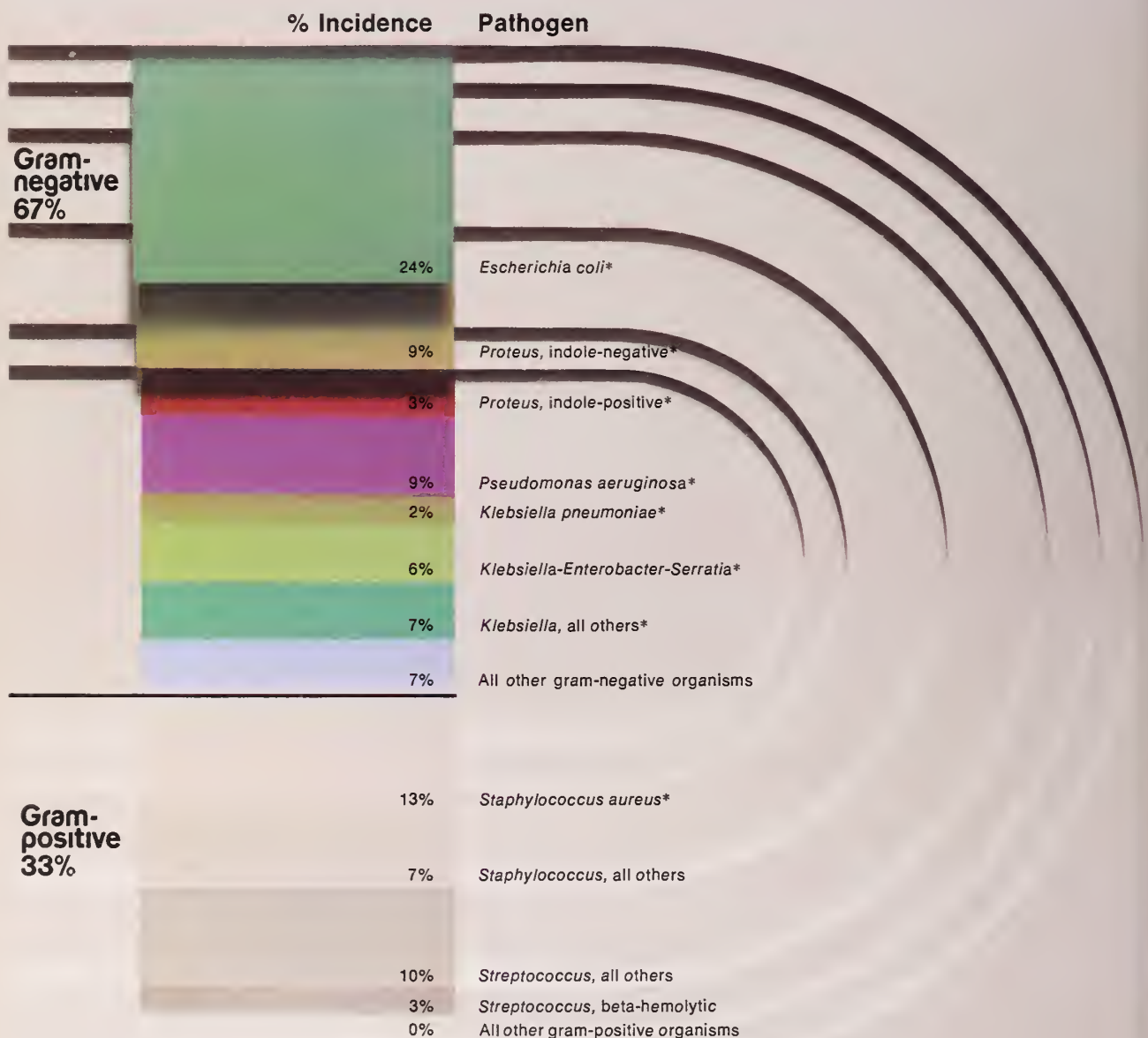
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Source: Gosselin Audit of Pathology Cultures—1971

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Risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

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Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

Ototoxicity, both vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment.

Monitoring of renal and eighth nerve function is recommended during therapy of patients with known impairment of renal function. This testing is also recommended in patients with normal renal function at onset of therapy who develop evidence of nitrogen retention (increasing BUN, NPN, creatinine or oliguria). Evidence of ototoxicity requires dosage adjustments

or discontinuance of the drug.

In event of overdose or toxic reactions, peritoneal dialysis or hemodialysis will aid in removal of gentamicin from the blood.

Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic and/or nephrotoxic drugs, particularly streptomycin, neomycin, kanamycin, cephaloridine, viomycin, polymyxin B, and polymyxin E (colistin), should be avoided.

The concurrent use of gentamicin with potent diuretics should be avoided, since certain diuretics by themselves may cause ototoxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity.

USAGE IN PREGNANCY Safety for use in pregnancy has not been established.

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USAGE IN PREGNANCY Safety for use in pregnancy has not been established.

INDICATIONS GARAMYCIN Injectable is indicated, with due regard for relative toxicity of antibiotics, in the treatment of serious infections caused by susceptible strains of the following microorganisms:

Pseudomonas aeruginosa, *Proteus* species (indole-positive and indole-negative), **Escherichia coli** and **Klebsiella-Enterobacter-Serratia** species.

Clinical studies have shown GARAMYCIN Injectable to be effective in septicemia and serious infections of the central nervous system (meningitis), urinary tract, respiratory tract, gastrointestinal tract, skin and soft tissue (including burns).

Bacteriologic tests to determine the causative organisms and their susceptibility to gentamicin should be performed

Bacterial resistance to gentamicin develops slowly in stepwise fashion; there have been no one-step mutations to high resistance.

In suspected or documented gram-negative sepsis, GARAMYCIN may be considered as initial therapy. The decision to continue therapy with this drug should be based on the results of susceptibility tests, the severity of the infection, and the important additional concepts contained in the Warning Box. In the neonate with suspected sepsis or staphylococcal pneumonia, a penicillin type drug is usually indicated as concomitant antimicrobial therapy.

GARAMYCIN Injectable has been shown to be effective in serious staphylococcal infections. It may be considered in those infections when penicillins or other less potentially toxic drugs are contraindicated and bacterial susceptibility testing and clinical judgment indicate its use.

CONTRAINDICATIONS A history of hypersensitivity to gentamicin is a contraindication to its use.

WARNINGS See Warning Box.

PRECAUTIONS Neuromuscular blockade and respiratory paralysis have been reported in the cat receiving high doses (40 mg./kg.) of gentamicin. The possibility of these phenomena occurring in man should be considered if gentamicin is administered to patients receiving neuromuscular blocking agents such as succinylcholine and tubocurarine.

Treatment with gentamicin may result in overgrowth of nonsusceptible organisms. If this occurs, appropriate therapy is indicated.

ADVERSE REACTIONS

Nephrotoxicity: Adverse renal effects, as demonstrated by rising BUN, NPN, serum creatinine and oliguria, have been reported. They occur more frequently in patients with a history of renal impairment treated with larger than recommended dosage.

Neurotoxicity: Adverse effects on both vestibular and auditory branches of the eighth nerve have been reported in patients on high dosage and/or prolonged therapy. Symptoms include dizziness, vertigo, tinnitus, roaring in the ears and hearing loss.

Numbness, skin tingling, muscle twitching, and convulsions have also been reported.

Note: The risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

Other reported adverse reactions, possibly related to gentamicin, include increased serum transaminase (SGOT, SGPT), increased serum bilirubin, transient hepatomegaly, decreased serum calcium; splenomegaly, anemia, increased and decreased reticulocyte counts, granulocytopenia, thrombocytopenia, purpura; fever, rash, itching, urticaria, generalized burning, joint pain, laryngeal edema; nausea, vomiting, headache, increased salivation, lethargy and decreased appetite, weight loss, pulmonary fibrosis, hypotension and hypertension.

DOSAGE AND ADMINISTRATION

GARAMYCIN Injectable may be given intramuscularly or intravenously.

For Intramuscular Administration:

PATIENTS WITH NORMAL RENAL FUNCTION*

Adults: The recommended dosage for GARAMYCIN Injectable for patients with serious infections and normal renal function is 3 mg./kg./day, administered in three equal doses every 8 hours.

For patients weighing over 60 kg (132 lb.), the usual dosage is 80 mg (2 cc.) three times daily. For patients weighing 60 kg (132 lb.) or less, the

usual dose is 60 mg (1.5 cc.) three times daily.

In patients with life-threatening infections, dosages up to 5 mg./kg./day may be administered in three or four equal doses. This dosage should be reduced to 3 mg./kg./day as soon as clinically indicated.

*In children and infants, the newborn, and patients with impaired renal function, dosage must be adjusted in accordance with instructions set forth in the Package Insert.

For Intravenous Administration:

The intravenous administration of GARAMYCIN Injectable is recommended in those circumstances when the intramuscular route is not feasible (e.g., patients in shock, with hematologic disorders, with severe burns, or with reduced muscle mass).

For intravenous administration, in adults, a single dose of GARAMYCIN Injectable may be diluted in 100 or 200 cc. of sterile normal saline or in a sterile solution of dextrose 5% in water; in infants and children, the volume of diluent should be less. The concentration of gentamicin in solution, in both instances should normally not exceed 1 mg./cc. (0.1%). The solution is infused over a period of 1 to 2 hours.

The recommended dose for intravenous administration is identical to that recommended for intramuscular use.

GARAMYCIN Injectable should not be physically pre-mixed with other drugs, but should be administered separately in accordance with the recommended route of administration and dosage schedule.

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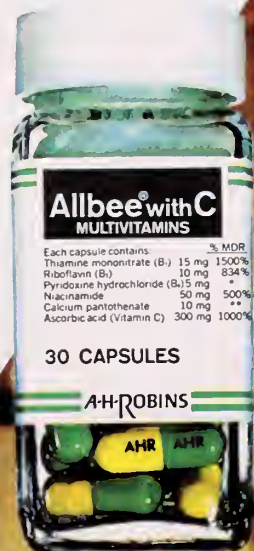
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Student Loan Guarantee Fund

Although the nation is short of physicians, a quick look into the future may find many more empty seats in medical school classrooms across the country.

The reasons? They all stem from the current "financial crisis" that students are facing in medical schools today. The situation is such that financial aid can essentially mean the difference between a degree or a dropout.

Recent studies have shown that the average medical student is not rich. He may have a family to support, or he may come from a low income, underprivileged economic background. This student must depend on outside help from student loans to keep him going.

Two sources for student loans are the federal government and the AMA-ERF Student Loan Guarantee Fund. Due to a major cutback in the federal student loan program budget, the sum available for loans is considered highly inadequate. It has been estimated that the percentage of students aided will drop from 35 per cent to 20 per cent, and unless additional funds can be found, the average loan will amount to only half the dollar amount that has been borrowed in previous years.

Reaction to the cutback may be summed up in the following comments from concerned medical students, cited by Edward D. Martin, Past President of the Student American Medical Association in a testimony before Congress:

"I am very personally involved, as without the financial aid from this program, I would not be able to afford medical school."

"To put it simply, if you cut the loans, you may also cut my throat. I am a freshman, married, and both my wife and I are in school, and we direly need the money."

"I, for one, am at a loss as to how I shall be able to continue my medical education next year without this program's aid in paying my tuition of \$2,350."

In addition to the students who have already applied for government-subsidized and AMA-ERF loans, a tremendous growth in applications has been predicted on the basis of the rise in the number of students presently in undergraduate science programs; a substantial increase in the age group of applicants to medical schools; past trends in the

number of applicants; and a growing interest in occupations directly related to social improvement.

In the years 1967-1969 the actual award of government loans to medical students remained almost constant, although the number of students and total funds requested by medical schools had both increased. With a surplus of students desperately in need of financial aid, they must now find additional funds to meet their needs.

The AMA is projecting that in the academic years 1969 through 1975, 20,300 new AMA-ERF loans worth \$26.3 million will be needed. Loan applications are already pouring into AMA headquarters at an unprecedented rate. The students who have already enrolled in medical curriculums, or are planning to enroll will be facing two major problems:

1. A tight money high interest situation greets medical students at most banks. AMA-ERF's support can give the medical student adequate credit to guarantee his bank loan.

2. The high cost of living and learning (tuition, books, rent) plus continued inflation depletes many meager student budgets.

Since there is no predicted relief from the federal government, we must increase available AMA-ERF funds to help many young people already in training, who may never receive their degrees. These loans are extended to interns and residents, as well as medical students, on a long term, low cost basis.

How the AMA-ERF Student Loan Guarantee Fund Works

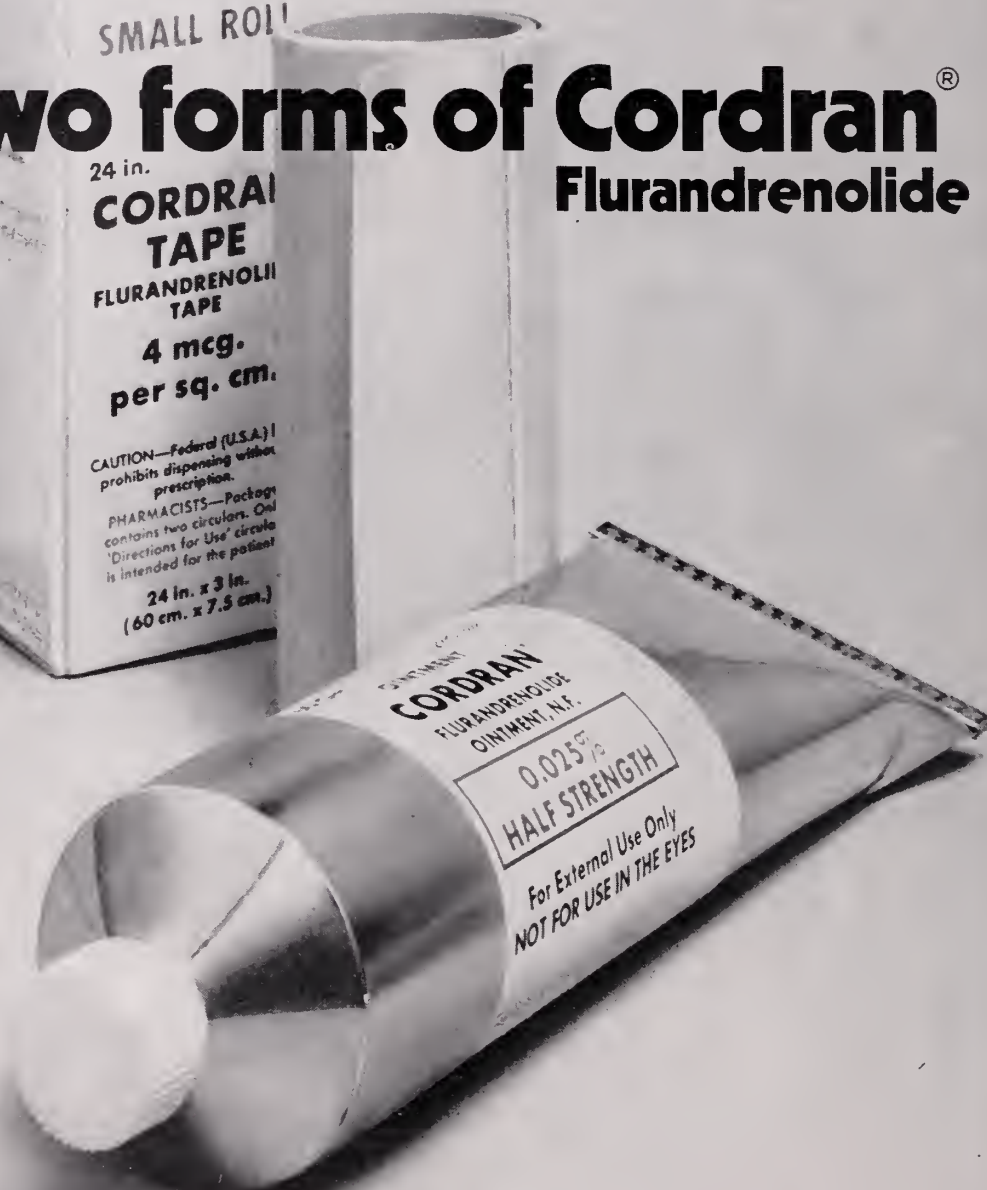
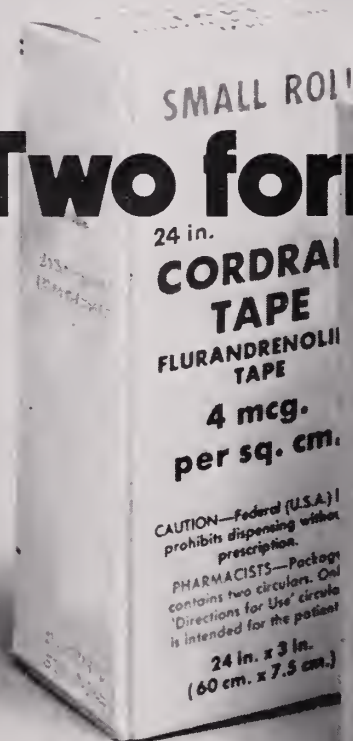
Your contribution to the program is held as a guarantee for repayment of loans. Each dollar you give puts another \$12.50 to work in loans made by a commercial bank. These loans in turn are made available to medical students at prevailing interest rates from participating member banks. As the loans are repaid by students, this money is again reactivated to help even more medical students finance their educations.

In past years, the Student Loan Guarantee Fund has been one of the most rewarding and financially successful aspects of the Foundation, and with the present situation, the need is clear for its increased support.



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Rhode Island Physicians' Attitudes On The Present And Future Practice Of Medicine

*We Are Much More Like We Thought
Than Some Caricatures Would Indicate*

By Robert V. Lewis, M.D.

There is a trend today for reassessment and reappraisal of ourselves as individuals, and of our institutions. The rapidly moving social changes of the past decade have brought into use the words "crisis" and "identity" more frequently than perhaps they have been used in the previous history of mankind. It is reassessment, reevaluation, and the search for "identity" in these "crises" which have led philosophically, even if subconsciously, to the survey of individual attitudes and the collective attitude of the Rhode Island Medical Society. This calls for a clear analysis and understanding of who we are and what our institution represents. Identity, whether of an individual or of an institution, is the satisfactory integration into an environment over which one does not have the ultimate control, but in which one may make an accommodation by selectively choosing alternatives

ROBERT V. LEWIS, M.D. of Providence, Rhode Island, Senior Physician, Rhode Island Hospital, Immediate Past President, The Rhode Island Medical Society.

Delivered at the 162nd Annual Scientific Assembly of The Rhode Island Medical Society, Wednesday, March 14, 1973 at the Colonial Hilton Inn, Cranston, Rhode Island.

The opinions expressed in this paper do not necessarily reflect those of the Board of Trustees of the Rhode Island Health Services Research, Inc. nor has the Board officially reviewed or commented upon the text of this paper.

on the basis of one's experience and attitudes. Clearly our first task then was to determine who we are and, having decided this, what alternatives and readjustments are acceptable. Evolution, not revolution, is the goal. The great physician Linnaeus asserted over 300 years ago that "Nature does not jump". In the area of political compromise it is well for all parties to appreciate the intensity of attitudes either for acceptance of change, or resistance. No solution is truly workable unless there is reasonable acceptance by all the parties concerned. Thus, the Administration of your Society cannot effectively take a stand on an issue unless it knows your position. In reviewing the results majority opinion is of paramount importance; but equally so are absolute numbers of individuals who may be available for innovative programs on a pilot basis; and lastly, the intensity of minority reaction is of importance if a society is to continue to be representative and inclusive.

Based on these propositions, it behooved your president on beginning his term of office to obtain accurate information about whom he represented and the attitudes of the members of the Society. At that point Doctor Joseph E. Caruolo had been working hard and long with his Committee on the Delivery of Health Care, exploring the possibility of a Society-sponsored Foundation. John E. Farrell, our Executive Secretary, had recommended the establishment of a long-range planning com-

(Continued on Next Page)

mittee. Your president had been invited by Rhode Island Health Services Research, Inc. (SEARCH) to make recommendations for the further study of the delivery of health care in Rhode Island. He suggested to SEARCH that no program was more necessary than to determine the composition of the Rhode Island Medical Society, its current attitudes towards the acceptance of changes, and a projection of the evolutionary changes to be expected in composition and modes of practice. Avery Colt of SEARCH recommended to its Board of Directors that this survey be approved. The survey itself from start to finish has been under the personal direction of Doctor H. Denman Scott, now Executive Director of SEARCH, whose expertise was matched only by his total and unstinted cooperation in time and effort in completing this first preliminary report in time for our Annual Meeting. Thanks, then, to Doctor Scott, Avery Colt of the Board of Directors of SEARCH, Doctor Joseph Caruolo and the Committee on the Delivery of Health Care, John E. Farrell, and the 803 members of the Rhode Island Medical Society who alone ultimately could make the survey a success.

COMPOSITION OF THE RHODE ISLAND MEDICAL SOCIETY

The first task was to determine the composition of the Rhode Island Medical Society. In matters of sex and age, 95 per cent of our organization are males and, more significantly 50 per cent of the membership is over 50 years of age. In interpreting the first graphic presentation of our data (Fig. 1) one would presume that in order to have an orderly and static physician population each of the decades should have equal representation. This, however, is not a valid observation since in the 60-plus age group retirement, illness and death are operative. Similarly, in the less than 40 year age group the potential physician supply is not fully represented, since physicians are frequently still in their residencies in their early 30's. Attention should therefore be directed primarily to the two middle decades, where the first generalization can be drawn, namely, that in respect to the Society's membership the projection is to relative stability, or to a slight increase.

In Fig. 2 one notes that the historical pattern of medical practice has been that of the solo practitioner as indicated by the rising slope of the curve of the number of solo practitioners by age groups. However, as the age scale descends one notes that the phenomenon is reversed with an in-

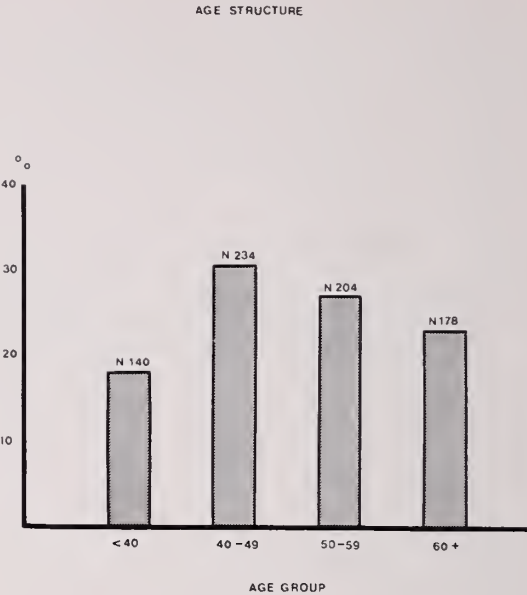


Fig. 1

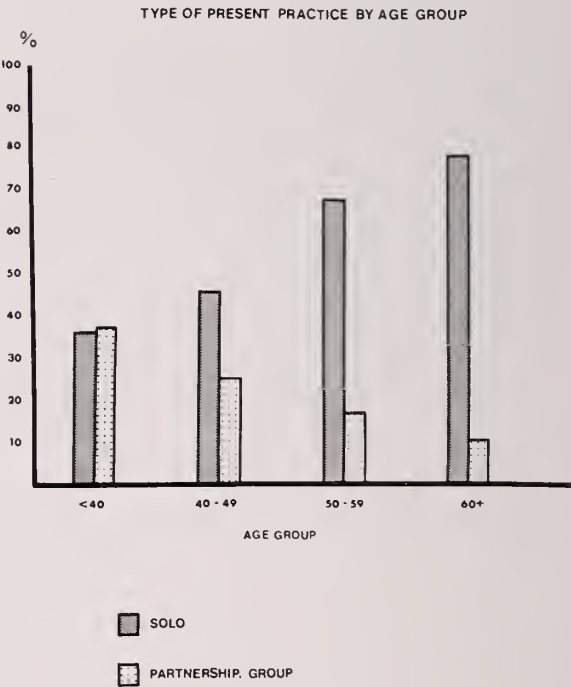


Fig. 2

crease in partnership and group arrangements. By the simplest of projections, in 1978 — five years hence — the Medical Society will be composed of an equal mix of solo practitioners and those practicing in partnership and group arrangements. Interpretations and editorializing in this paper will be kept to a minimum; but it is quite clear that the identity of the Medical Society, its objectives,

its problems as related to the regulation of practice, methods of financing medical care, and hospital relationships will be based not as strongly on individual participation, but more equally on members participating in group and partnership arrangements and those in solo practice.

In Fig. 3 the percentage of physicians rendering primary care is analyzed by age groups. At the present time 41 per cent of our membership are involved in primary care. These include the general practitioners, internists, obstetricians, and pediatricians. Referring to the graph, if the bars are moved to the right with the progression of time, one must conclude that, if present trends continue, the supply of primary physicians, at least in Rhode Island, will have significantly diminished as the older primary physicians move out and are not replaced by those in the lower age brackets. It is significant, although it is not shown on this graph, that only 9 per cent of our membership are rendering primary care in its most traditional form, namely as general or family practitioners. With approximately 40 per cent of physicians in Rhode Island rendering primary care we may extrapolate to a current total of approximately 450 physicians so involved. With a population in Rhode Island in excess of 800,000, the ratio of patients to primary physician is approximately 2000 to one. Or, in an ideal hypothetical state where every citizen is covered by a primary physician, the patient panel would be close to 2,000 patients per physician. Regardless of the future method of providing health care, it is obvious that in any planning there should be provisions for increasing the supply of primary care physicians.

AVAILABILITY OF PHYSICIANS

Now, given this distribution of physicians and their mode of practice, is there physician availability? With an overall ratio of physicians to population in the state of Rhode Island of one physician per 1,000 citizens, which is one of the best in the nation, a priori one might predict that professional manpower is available. The data in Fig. 4 confirm this prediction. It is demonstrated in the lower bar graph that in all age groups patients known to a physician are accepted for a routine visit by the great majority of physicians in less than a week. Entry by a new patient into the health care system in Rhode Island similarly can be effected in a week's time in the case of over half the physicians. Thus, availability and entry

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RHODE ISLAND MEDICAL SOCIETY SURVEY 1972-73
PRIMARY CARE PRACTICE BY AGE GROUP

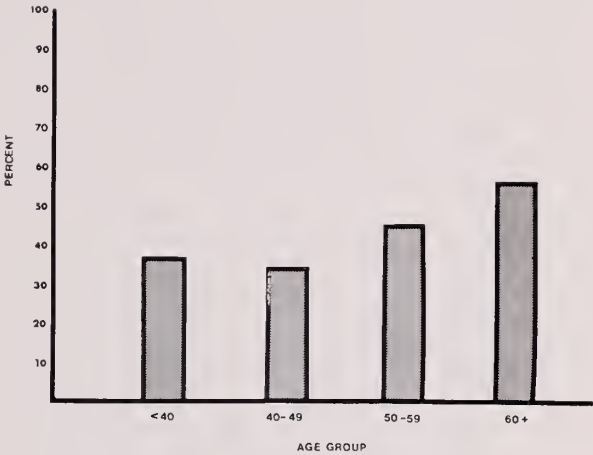


Fig. 3

TIME REQUIRED TO OBTAIN ROUTINE APPOINTMENT FOR
OLD AND NEW PATIENTS BY AGE GROUP

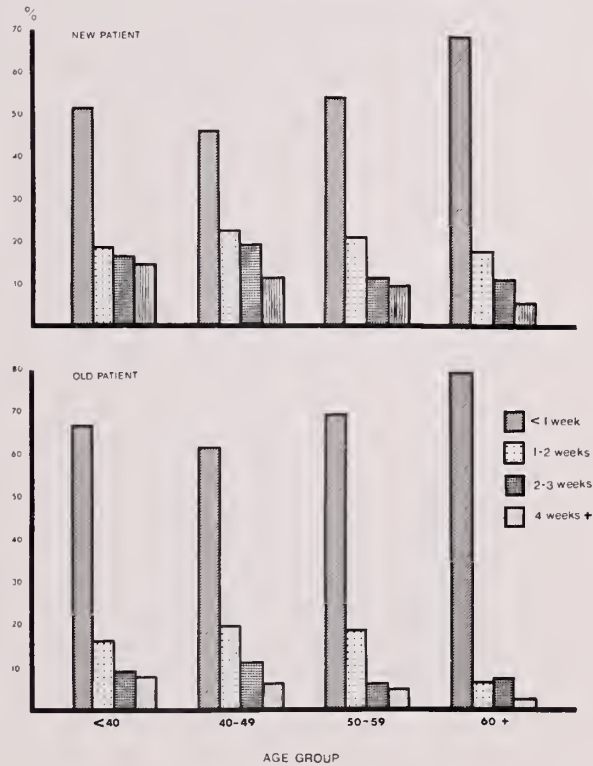


Fig. 4

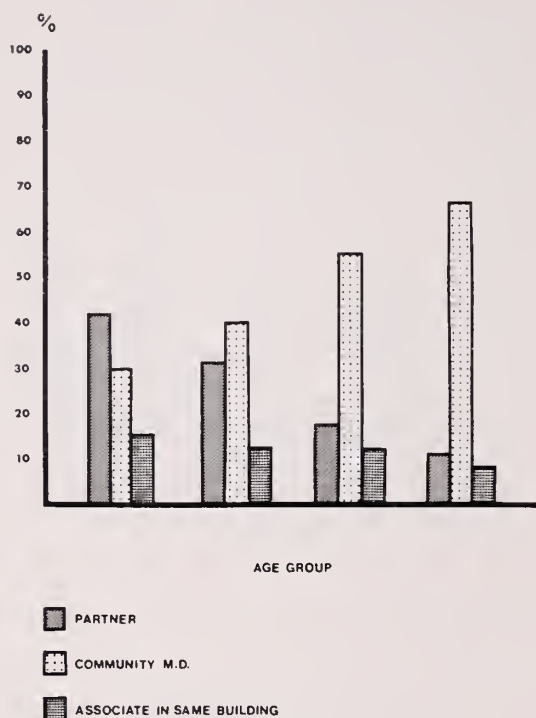


Fig. 5

CONTINUING EDUCATION

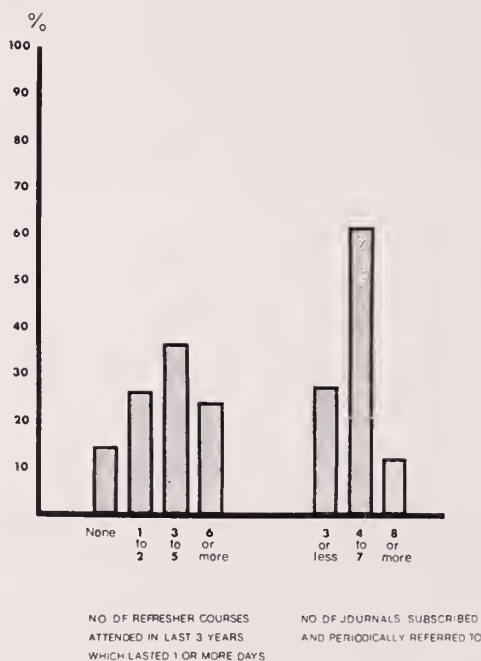


Fig. 7

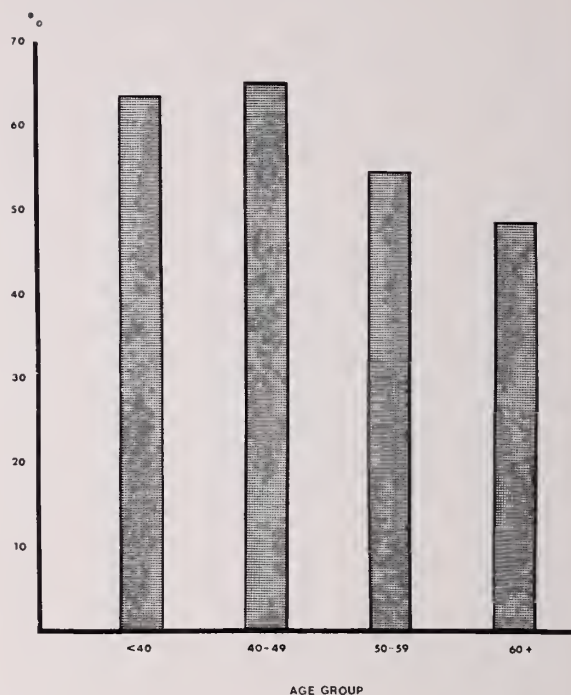


Fig. 6

compare favorably with any health care system extant anywhere and under any circumstances.

A reasonably acceptable health care system must provide for continuous coverage. Fig. 5 illustrates present arrangements, and permits easy projections on the expected future evolution of coverage arrangements. The more formal coverage arrangements by partners and associates in the younger age groups lead to a prediction that coverage in the future will be more formal. The historical and currently predominant pattern of coverage followed by the older age groups, the use of another independent solo practitioner in the community will be replaced by more closely defined coverage arrangements. But most importantly, regardless of the arrangement, over 85 per cent of the physicians of Rhode Island indicated that in their opinion their coverage was adequate regardless of their methods.

As to the use of hospital emergency rooms for routine coverage, less than one per cent of respondents indicated such a practice.

QUALITY OF CARE

Another area of challenge to our identity and integrity has been the matter of whether we are delivering quality care. There are those lay professional health planners who have called for re-

SANCTION UNDER FOUNDATION REVIEW MECHANISM

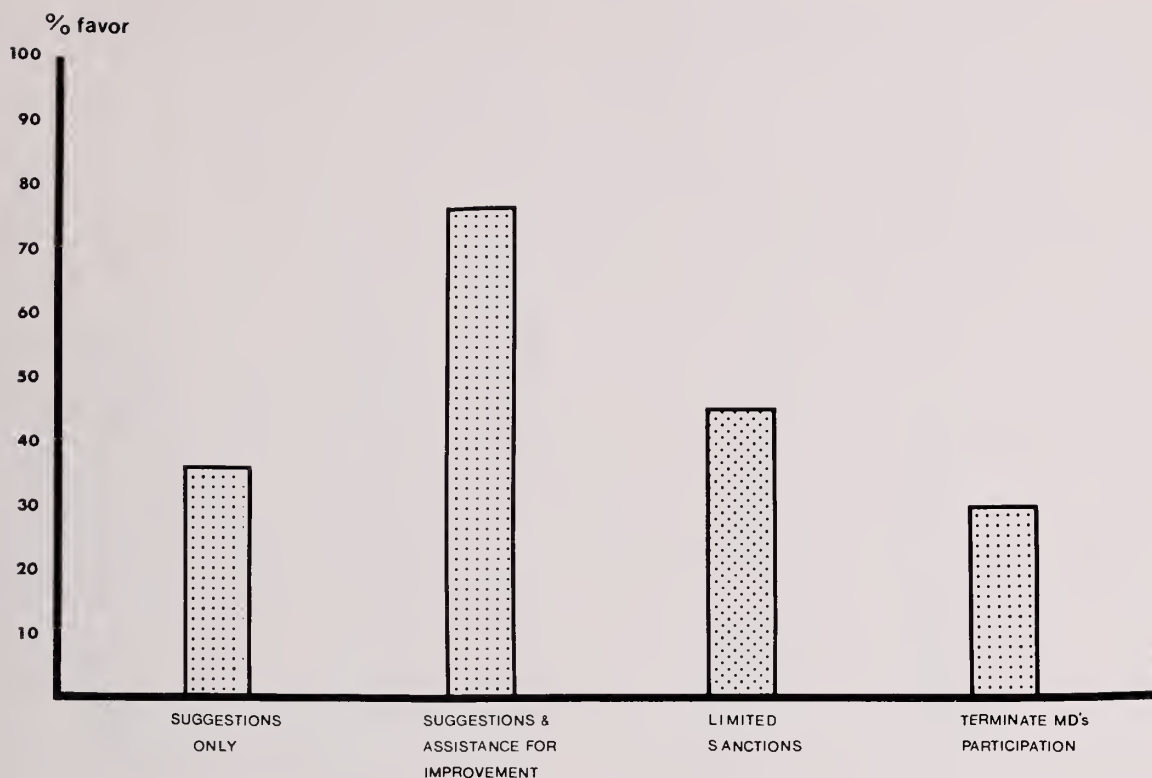


Fig. 8

licensure or recertification and have questioned the physician's continuing education and his competence. It is not, however, the goading from outside side which has produced our present profile, as illustrated in Figs. 6 through 9, but rather those forces generated by the individual physician's pride in his work, a desire to deliver to his patients the best possible care within his capacity, and the regulation and control of organized medicine itself. The first projection in this series (Fig. 6) shows that of those who are classified as specialists in Rhode Island, over 60 per cent have taken the time and trouble to prepare themselves and successfully pass specialty board examinations for certification. Without any duress or prompting from the outside, 86 per cent of the physicians of Rhode Island have taken from one to six refresher courses in the past three years (Fig. 7). The average physician regularly reads between four and seven professional journals, with many reading more. Is there smugness in this drive for excellence and competence? Not at all. Physicians themselves welcome and are more than willing to accept Peer Review in assessment of their performance. However, they strongly oppose judgment of

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CONTINUING EDUCATION

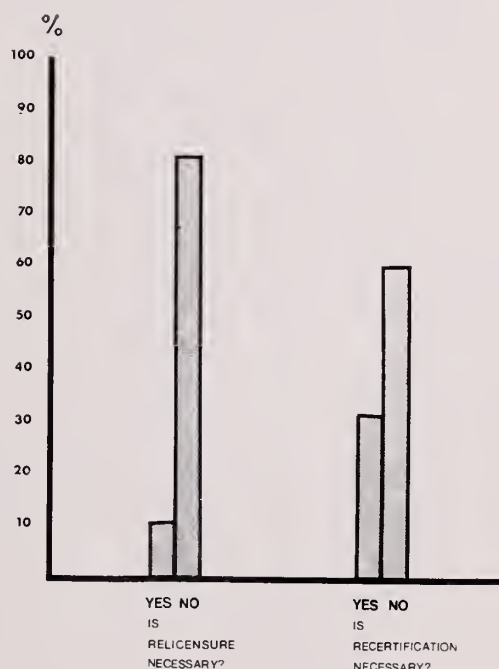


Fig. 9

REIMBURSEMENT MECHANISMS
THIRD PARTY AGENCY

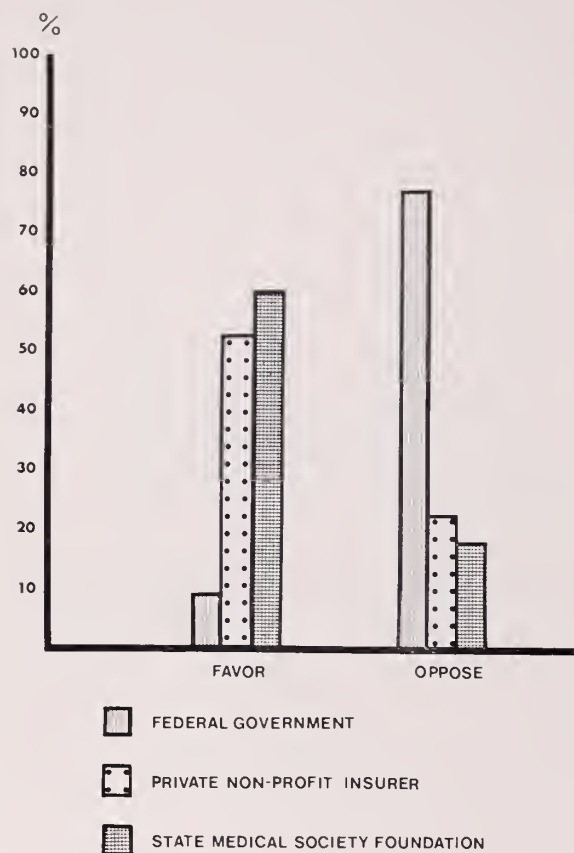


Fig. 10

professional matters by non-professionals. Over 90 per cent advocate periodic quality review by their peers (Fig. 8). Furthermore, the physicians of Rhode Island are realistic; most consider cursory review alone with suggestions for improvement inadequate; rather, they seek suggestions and assistance for improvement, even to the point of application of limited sanctions.

It is significant, therefore, as shown in Fig. 9, that over 80 per cent of physicians are opposed to relicensure, and less than a third believe that recertification in the specialties is necessary. There is no smugness in our self-appraisal with respect to quality care and continuing education. A Rhode Island physician may justifiably take satisfaction in this regard, and your president would challenge any other professional body in any discipline to exceed the dedication to the principle of professional quality control and the continuous maintenance

REIMBURSEMENT MECHANISMS
METHOD OF PAYMENT TO A PHYSICIAN

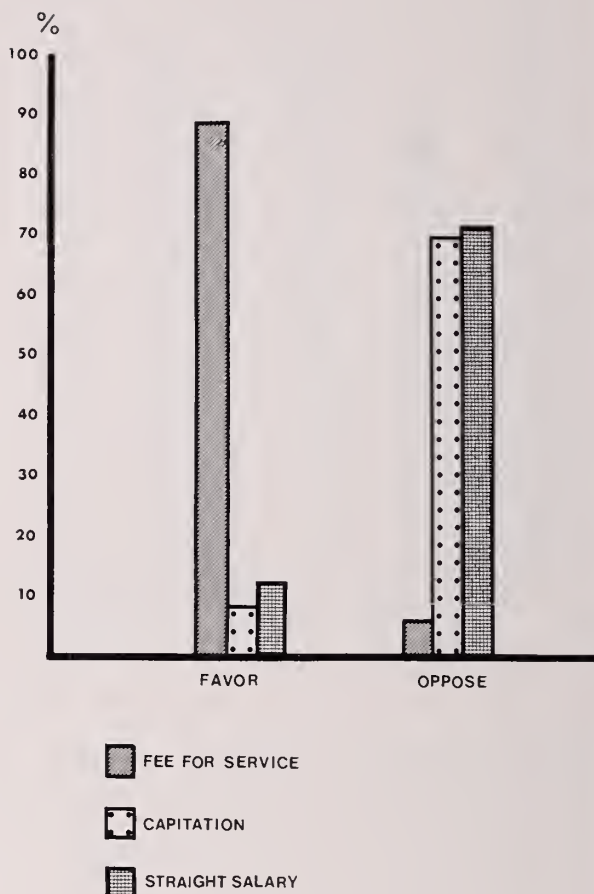


Fig. 11

nance of high standards as have been set by the members of the Rhode Island Medical Society.

REIMBURSEMENT

How do Rhode Island physicians, providing relatively good access to the system, available in sufficient numbers, providing quality care judged by any criteria, and willing to have their services reviewed and improved by constructive criticism, wish to be paid for their services? Should a total prepayment plan be instituted? What are their preferences with regard to premium collections and equitable distribution? The Society members show (Fig. 10) a strong preference for state medical society foundation management with Blue Shield as the probable carrier, or even straight management by Blue Shield itself. Their endorsement of these concepts is almost as positively stated as is their objection to participation in a

program of total prepayment furnished exclusively by the federal government.

However, regardless of the third party agency, or whether the present method of reimbursement is superseded by a method of comprehensive care, there is an overwhelming preference for reimbursement on the basis of fee for service (Fig. 11). Straight capitation without respect to services rendered is almost tantamount to straight salary, which is strongly opposed. The opposition to straight salary by a physician is not only a hypothetical matter, but also an absolute current reality. Few indeed are the full-time physicians in any of our hospitals who, although basically they may be said to work on salary, do not have the option to practice at least part of their time on a fee-for-service basis. In those institutions in which the salary arrangement operates, a fee for service is actually in effect, since some schema of relative productivity and incentives are the basis of their contracts.

Should a total prepayment system prevail in the future, what are the attitudes of Rhode Island physicians with respect to the proper determination of their reimbursement (Fig. 12)? While the physician as an individual may take the philosophical viewpoint that he alone shall determine

for whom and for how much he will serve, he does not take this rigid position at all. He is perfectly willing to have his worth evaluated by his peers in the Medical Society, and more than half of his colleagues are willing to have a fair non-profit insurer determine his fee schedule. Beyond these choices his preference is for evaluation by consumer representatives over commercial insurers. Hospital representatives, state representatives, or federal representatives are in descending order the least desirable for him.

DELIVERY OF HEALTH CARE

We may now turn to some suggested changes in the delivery of health care which have as their premise that there is always room for improvement. With respect to the generic issue of more comprehensive care regardless of the institution or the mode of its delivery, there is a strong mandate for the availability of a yearly physical examination (Fig. 13). This is in keeping with the concept of health maintenance and preventive care. As strongly endorsed, but properly in second place since there is no substitute for the physician-patient encounter, is broad, multiphasic screening as a supplement. Thus, one would conclude that, regardless of the method of financing or the mode

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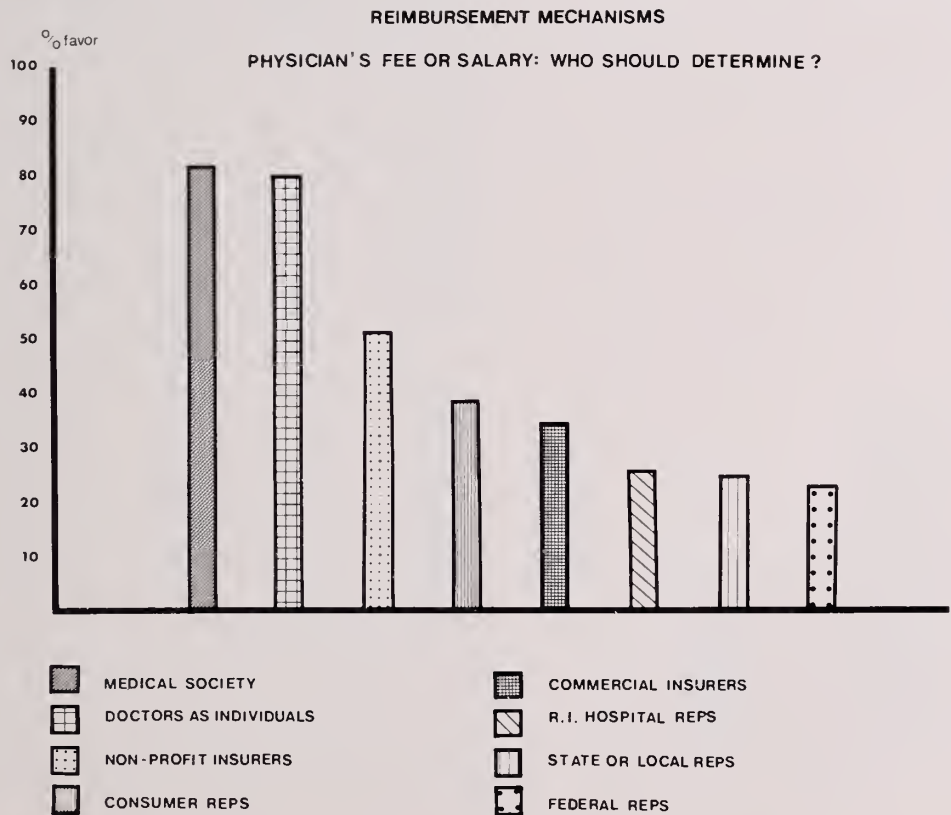


Fig. 12

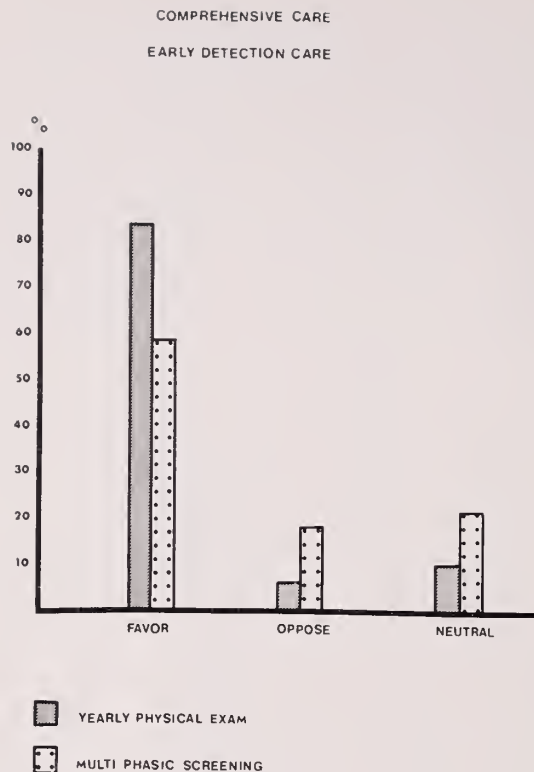


Fig. 13

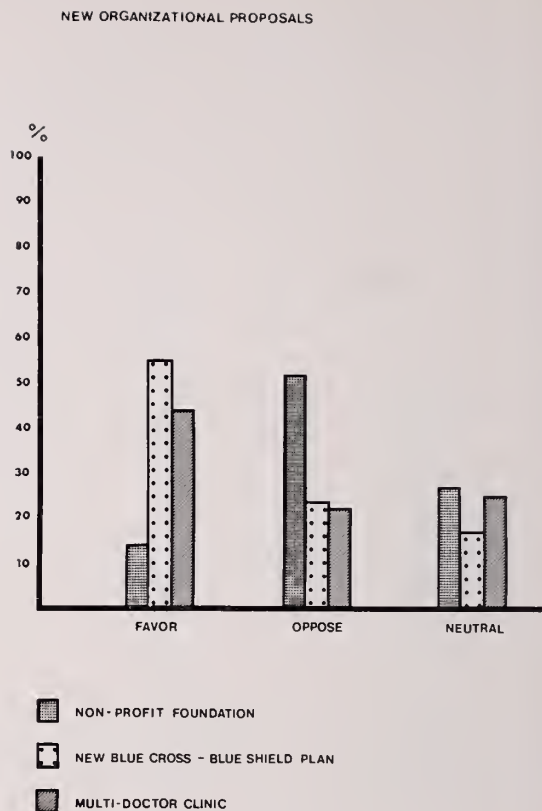


Fig. 14

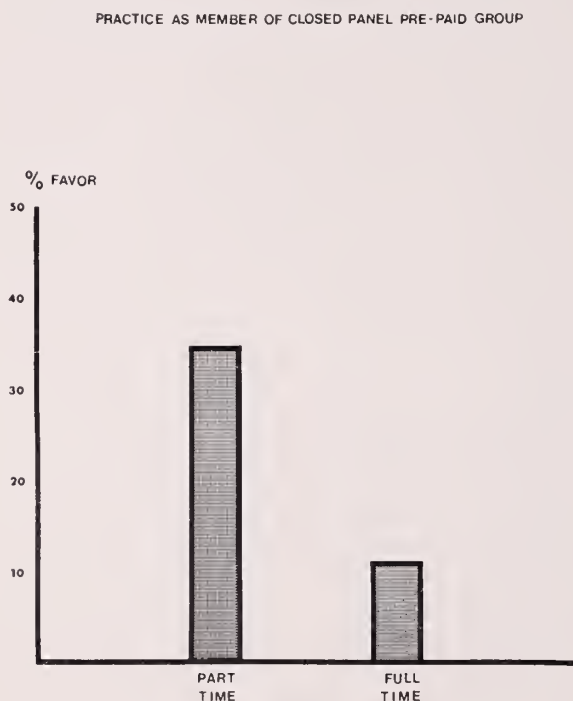


Fig. 15

of delivery of care, the yearly physical examination and a broad spectrum screening should be made available to everyone for maximum health care.

If changes are to be made in the future with respect to new organizational proposals and new programs of comprehensive care, what are the preferences of Rhode Island physicians (Fig. 14)? Overwhelmingly they support a possible new comprehensive plan by Blue Cross and Blue Shield. The physicians of Rhode Island have confidence in these organizations, realize the superb job they have done, and the extensive data base and actuarial experience they have to accomplish this task. In favoring the multi-doctor clinic underwritten at the program's start by participating physicians, the advantage seems to be in the maintenance of close professional control. The Society did not receive an endorsement to proceed with a non-profit foundation at this time.

However, when specifically asked whether a physician maintaining his present office would be willing to participate as a member of a closed-panel, totally prepaid multi-specialty group, a sufficient number, in excess of 200, indicated a willingness to participate on a part-time basis (Fig. 15). Less

MEDICAL RECORDS

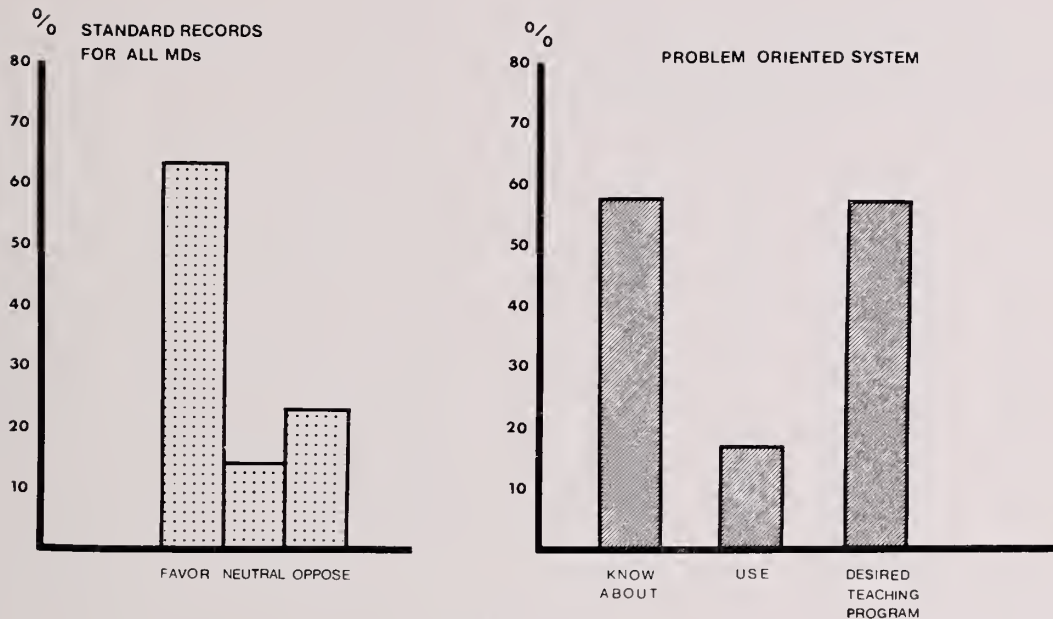


Fig. 16

than 10 per cent of the physicians are willing at this time to make such a complete change as to relocate their offices and devote full time to a closed-panel prepaid group. These figures may be interpreted in several ways. The most emphatic conclusion is that there is not a ready supply of physicians available to move into new locations as full-time members of closed-panel, pre-paid groups. However, given their confidence in Blue Shield-Blue Cross for the marketing of a comprehensive, prepaid plan, there is in the state a sufficient number of physicians available on a part-time basis to make a sophisticated, prepaid comprehensive plan marketed by Blue Shield a distinct possibility.

Basic in any new organizational program is the necessity for standardization of services and records. This will be no problem, since almost two-thirds of the physicians of Rhode Island are agreeable to the maintenance of standard record keeping (Fig. 16). This is interpreted to apply not only to clinical records essential to utilization review, but also in the matter of accounting. That the physicians of Rhode Island are not averse to change, where change may be said to result in improved performance, is indicated by their attitude

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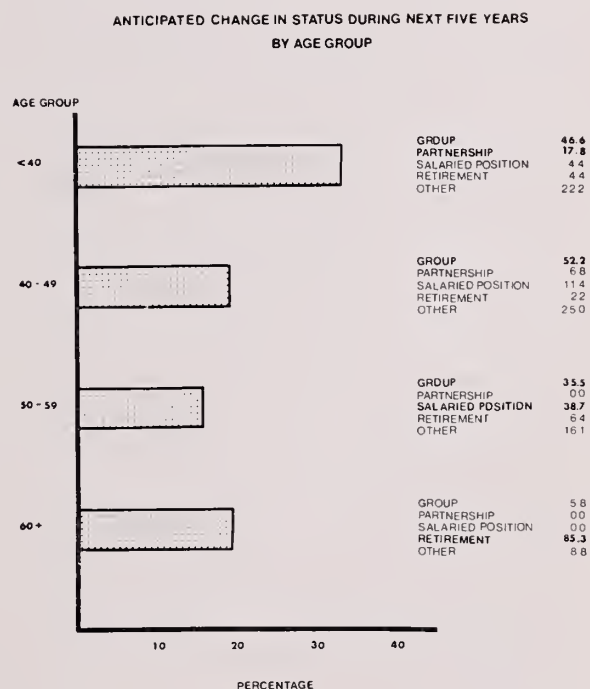


Fig. 17

Blue Shield And National Health Insurance

Government's Role In Protecting Public Interest And Administrative Expertise Of Blue Shield Should Be Recognized

By Arnold Forter, M.D.

No one in this room this evening needs a crystal ball to foresee the eventuality that national health insurance legislation will be enacted in this country. It is inevitable, and of as serious concern to physicians as was social security, medicare, and PSRO legislation. Proposals, in one form or another, were introduced by many groups and individuals in the last session of Congress and are being reintroduced with or without modification in the present session. Support has come from many segments of society both to the right and to the left, as well as from the great majority. The only question remaining is when and in what form will this legislation surface.

A consensus of Congress at this time predicts definitive legislation by 1974 or 1975.

The proposals in the past run the gamut from the administration's National Health Insurance Partnership Act and the AMA's Mediredit bill

ARNOLD PORTER, M.D. of Providence, Rhode Island, President, Rhode Island Medical Society Physicians Service Blue Shield; Director, Emergency Room, Rhode Island Hospital, Providence, Rhode Island.

Delivered at the 24th Annual Meeting of the Blue Shield Corporation at Providence, Rhode Island, March 7, 1973.

(Health Care Insurance Assistance Act) to the Kennedy-Griffiths bill (Health Security Act). Other influential Congressmen, whose names are associated with national health insurance bills, include Al Ullman, William Roy, Paul Rogers, Jacob Javits, Claiborne Pell, Walter Mondale, Russell Long, Abraham Ribicoff, and Wilbur Mills among others.

It is generally considered that no one bill will be accepted as introduced but that compromise legislation will emerge, encompassing a middle of the road approach which Congress believes is fiscally sound, publicly acceptable, and capable of passage through both Houses.

This bill, I predict, will include many of the major proposals that have been the subject of much discussion in the past. These include guaranteeing everybody the right to purchase a standard benefit package and a right to keep it through job changes and unemployment, some restructuring of financing and delivery, building on existing facilities with re-oriented policies, state and local control with federal mandates, integration of all federal plans, an employer-employee contributory system, cost and utilization control mechanisms, a reversal of incentives, children programs, catastrophic illness, and I hope some measure of co-insurance.

Of great importance to this Corporation, the medical profession, and the public should be a continuing role of Blue Shield and the private insurance industry.

It is to the latter issue that I wish to address myself today since I believe a strong Blue Shield plan acting as contractor to the government is the best and perhaps the only vehicle through which physicians can retain a voice in direction and management of our future health care system. The question is clear: Will we be asked to help run the program or will the government run it solely, or will it be run by Aetna or Metropolitan or some new organization yet to be devised? The government is going to be making these decisions relatively soon, and it will select as carriers only those organizations that have proved their administrative capabilities, and also their responsiveness in many specific areas of interest to the government and society. There are adequate indicators already emerging from HEW, Congress, and national health insurance debates to foresee what the health planners have in mind.

What I am trying to say is that we must sacrifice present complacency to assure that we command future respect. In order for Blue Shield to be assured of a position in the starting line up, many reforms should be considered at both the national and local level.

Already at the national level, where I have served for two years on the Board of Directors, much consideration has been given and monies spent in anticipation of a national health policy. In January of this year a drafted revision of the National Association of Blue Shield Plans by-laws and membership standards was presented to the Board of Directors. Although no action can be taken until the annual meeting in May, the Committee recommended among numerous changes that, although physician membership including representation from organized medicine was essential if the unique character of Blue Shield is to be preserved, the AMA no longer has the authority to appoint five representatives to the Board. It did recommend that of the nine Directors at Large, who shall be physicians or practitioners with unlimited licenses or dentists, three shall be representatives of the AMA.

It is my personal belief that Blue Shield, serving 69 million people, will have more credibility with Congress and the voters as a vehicle for national health insurance if their image is not as

closely associated with the providers of health care as exists at present.

Along the same lines, one year ago, the Blue Cross Association and the American Hospital Association were divorced, and the design in the center of the familiar Blue Cross symbol has been changed to fit the new image.

Also at the national level, the Blue Shield and Blue Cross Associations are each contributing one million dollars a year to a Joint Long Range Systems Planning Committee, chaired by Mr. Arthur Hanley, which is charged with the responsibility of developing computer systems capable of administering a national health insurance plan.

It is of great interest and pride to Rhode Island Blue Shield that the Blue Shield and Blue Cross Executive in Charge of Systems Development for the Joint LRSP Committee is Benjamin Alfano, known to many of you. Ben was formerly an Assistant Director in Charge of EDP for our plan, where he served with distinction and respect for 30 years.

In concert with the national planning, many reforms and changes should be made at the local plan level to insure us a voice in the design and administration of whatever form national health insurance evolves. The present situation is not radically unlike that which existed in 1965 when our Blue Shield staff, Board of Directors, and Corporation faced a decision on whether we would participate as a carrier in the Medicare program, which many physicians feared and opposed.

It is to the everlasting credit of the medical profession and Blue Shield, and to the benefit of the people of this state, that we made the right decision. The most remarkable difference between that situation and the present one is the greater *magnitude* now of the changes that are required in order for Blue Shield to prepare itself.

It might be instructive here to look briefly at how much Blue Shield has progressed since those pre-medicare days. In 1965, we called ourselves "Physicians Service". We printed all our brochures in green ink, and we insisted on using our own symbol rather than the Blue Shield primarily to retain and protect our local identity, which is readily understandable.

In those days, we were primarily a "Surgical" Plan and our best program was built around a fee schedule based on income limits. Today, Plan 100 includes a vastly expanded scope of benefits, and Major Medical coverage remains a fast growing

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program. We are experimenting with prepaid comprehensive services, and looking at other ways of expanding benefits. Our administrative staff is engaged in aggressive negotiations to bring about dental care, and are exploring drug, vision care, and other programs which will enlarge the scope of services provided to the public.

In pre-medicare days development of fee schedules, claims adjudication, and similar problems were handled entirely by committees of physicians, primarily surgeons, and Utilization Review and "Peer Review" were vaguely understood concepts too far in the future to mean much. Today, key committees include lay people. Utilization Review has become a function involving substantial numbers of staff, extensive computerized data files, and hundreds of volunteer hours by Physician committees all over the state. We are participating in the Medical Society Peer Review program which may with some changes evolve into the legislatively required PSRO program.

Obviously, our progress has been remarkable. So you may ask, "Why rock the boat?" I must answer that what we have done is still not enough. It is not my charge as President to rock the boat, but I feel it is my duty to stimulate thought. There are still methods of improving our image, with which we must be concerned if Blue Shield is to play a major role in formulating and participating in national health insurance. One has only to look at some of the reforms and expansions in the recently passed Public Law 92-603 (H.R.-1) to foresee the direction our legislators are taking and in order to have insight into the thoughts of our Congress. Under this new law Medicare and Medicaid have now become programs not only of reimbursement but also of regulatory authority with emphasis on tighter fiscal control, more public accountability, and consumer protection. Blue Shield cannot be in a position of appearing to promote only physicians' interests. Some day in the near future we must face the fact of more consumer representation on our Board of Directors as well as on this Corporation. If we fail to bite the bullet on this question, I am certain that we are going to see legislation introduced in Rhode Island as it has been before, as well as in other states, which may not be as favorable as if we ourselves took the initiative. It would, in my mind, be irresponsible if we waited for legislative action. You should be aware that Rhode Island Blue Cross took this step a year ago and broadened public representation on both the Board and the Corporation in

lieu of hospital trustees. This has in no way altered the effectiveness of the Board, and it is of interest that the change was initiated by official resolution of the Hospital Association of Rhode Island itself.

In addition to increased consumer representation, we must speed up the development of such programs as prescription drugs, dental care, vision care, and others to demonstrate our capability of delivering broader services.

We must seek further experimentation in scope and number of alternate delivery systems.

We must seize the opportunity to work with the state government on "Dread Disease" and catastrophic illness, and unemployment programs to provide these needed benefits through a blend of public and private resources.

We must expand and further strengthen our Utilization Review and Peer Review mechanisms to demonstrate effective controls on cost and quality of care.

We must expand benefits to include medical emergencies in addition to already covered surgical emergencies.

We must make available to the direct pay subscribers Major Medical benefits heretofore available only to groups — and I am pleased to announce such a program will be offered this year.

We must establish, with Medical Society participation, a strong mechanism to guarantee the integrity of full payment programs to assure that the plan does, in fact, provide full payment of charges for all types of treatment to every subscriber.

We must look at such concepts as "Hold Harmless" to assure that the subscriber is not penalized in disputes over utilization or fees.

We must cast off some of our understandable resentment and look objectively at some of the guidelines suggested by public representatives and consumers, ignoring those which are ridiculous and adopting those which make sense and are workable.

Accelerated change in these and other areas is necessary if we are to retain leadership in the health care system of the future. Most importantly, we must find methods of accomplishing these changes in a way that will bring Blue Shield and the medical profession closer together rather than pushing them apart.

We cannot view the public and government as the enemy and consider physicians an isolated minority. There are two common expressions of

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Rhode Island Medical Society Physicians Service

Report Of The 24th Annual Meeting Of The Corporation At Providence, R.I., March 7, 1973

The 24th annual meeting of the Corporation of the Rhode Island Medical Society Physicians Service was held at the Blue Cross building, 444 Westminster Mall, Providence, Rhode Island, on Wednesday, March 7, 1973.

The meeting was called to order by the President, Doctor Arnold Porter, at 5 p.m.

Members of the Corporation in attendance were: Carl V. Anderson, M.D., Paul E. Barber, M.D., D. Richard Baronian, M.D., Robert E. Baute, M.D., Mr. Albert Bonte, Bertram H. Buxton, Jr., M.D., Joseph E. Caruolo, M.D., Nathan Chaset, M.D., Joseph D. DiMase, M.D., Mr. Francis E. Doherty, Charles S. Dotterer, M.D., Herbert Ebner, M.D., Donald P. Fitzpatrick, M.D., Mr. Daniel Ford, Seebert J. Goldowsky, M.D., John P. Grady, M.D., Edmund T. Hackman, M.D., Herbert F. Hager, M.D., David R. Hallmann, M.D., Thomas Head, M.D., Paul J. M. Healey, M.D., John B. Lawlor, M.D., Rev. Joseph L. Lennon, C.P., Robert V. Lewis, M.D., Vincent I. MacAndrew, M.D., Earl J. Mara, M.D., Peter L. Mathieu, Jr., M.D., James A. McGrath, M.D., Judge Florence K. Murray, J. Douglas Nisbet, M.D., Frederick A. Peirce, Jr., M.D., Ralph F. Pike, M.D., Arnold Porter, M.D., Charles B. Round, M.D., Robert P. Sarni, M.D., Guy A. Settupane, M.D., Richard P. Sexton, M.D., Erwin Siegmund, M.D., Leonard S. Staudinger, M.D., John J. Walsh, M.D., Mr. Richard P. Welch, and Joseph E. Wittig, M.D.

Also present were Mr. Arthur F. Hanley and members of his administrative staff, and John E. Farrell, Executive Secretary of the Corporation.

Members of the Corporation absent were: Charles J. Ashworth, M.D., Richard G. Bertini, M.D., Chelcie C. Bosland, Ph.D., Joseph E. Cannon, M.D., Mr. George Chaplin, George V. Coleman, M.D., Dominic Coppolino, M.D., Morgan Cutts, M.D., John A. Dillon, M.D., A. John Elliot, M.D., Mr. Emil Fachon, Charles Farrell, M.D., Martin E. Felder, M.D., Martin Feldman, M.D.,

David Freedman, M.D., Edward J. Gauthier, M.D., Constantine S. Georas, M.D., Frank Giunta, M.D., Mr. John J. Halloran, John Ham, M.D., Milton W. Hamolsky, M.D., Charles L. Hill, M.D., Stephen J. Hoye, M.D., J. Gerald Lamoureux, M.D., Philip J. Lappin, M.D., Henry M. Litchman, M.D., William J. MacDonald, M.D., Thomas J. Martin, M.D., Mr. Charles V. McCaffrey, Mr. Felix Mirando, Samir G. Moubayed, M.D., David Newhall, M.D., Raul Nodarse, M.D., William J. O'Rourke, M.D., P. Joseph Pesare, M.D., Mr. George Ramsbottom, James A. Reeves, M.D., Joseph L. C. Ruisi, M.D., Francis Scarpaci, M.D., Mr. John Shepard, II, Stanley D. Simon, M.D., George H. Taft, M.D., William R. Thompson, M.D., Wilson F. Utter, M.D., Armand D. Versaci, M.D., and Elihu S. Wing, Jr., M.D.

ANNUAL REPORT OF THE SECRETARY

The President noted that the annual report of the Secretary, Judge Florence K. Murray, was included in the handbook for the meeting.

Action: A motion was made, seconded and voted that the annual report of the Secretary, as submitted, be approved and placed on record.

ANNUAL REPORT OF THE TREASURER

The annual report of the Treasurer, Mr. George W. Chaplin, was included in the handbook for the meeting.

Action: A motion was made, seconded and voted that the annual report of the Treasurer, as submitted, be received and placed on record.

ANNUAL REPORT OF THE PRESIDENT

Doctor Arnold Porter, President of the Corporation, read his annual report, copy of which is made part of the official record of the meeting.

NOMINEES FOR BOARD OF DIRECTORS

Doctor Porter announced that the House of Delegates of the Rhode Island Medical Society had nominated the following physicians for three year terms each on the Board of Directors.

Joseph E. Caruolo, M.D., of Providence

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William J. MacDonald, M.D., of Providence

Earl J. Mara, M.D., of Pawtucket

John J. Walsh, M.D., of Narragansett

Action: A motion was made, seconded and voted that the nominees of the Society be elected as board members to serve until the annual meeting in 1976.

* * *

Doctor Porter announced that the Nominating Committee of the Corporation, consisting of Drs. Earl J. Mara, Chairman, Bertram H. Buxton, Jr., Peter L. Mathieu, and Messrs. Francis E. Doherty and Richard P. Welch, had nominated for three year terms each on the Board of Directors the following:

Albert E. Bonte, of Woonsocket, R.I.,

Vice President and Treasurer, Bonte Industries

Charles V. McCaffrey, of Cumberland, R.I.

President, Valley Gas Company

Gerald J. Fogarty, of Barrington

Senior Investment Officer,

Investment Management Division,

Industrial National Bank

Action: A motion was made, seconded and voted that the three nominees presented by the Nominating Committee be elected as directors to serve until the annual meeting in 1976.

COMMENDATION OF GEORGE W. CHAPLIN

Doctor Porter expressed his personal appreciation, as well as that of the Board, for the outstanding service given the Corporation by George W. Chaplin who had resigned. He noted that Mr. Chaplin had served for many years, and had been Treasurer of the Corporation. He read a special citation which would be presented to Mr. Chaplin.

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Arthur F. Hanley, Executive Director of the Corporation, read his annual report, copy of which is made part of the official record of the meeting.

* * *

Mr. Hanley introduced Mr. Douglas McIntosh who read a short paper on the federal legislation establishing Professional Service Review Organizations, copy of which is made part of the minutes of the meeting.

ADJOURNMENT

The meeting was adjourned at 5:54 p.m., and the members were guests of the Corporation at a reception and dinner.

Respectfully submitted:

JUDGE FLORENCE K. MURRAY

Secretary

ANNUAL REPORT OF THE SECRETARY

The 23rd Annual Meeting of the Corporation of the Rhode Island Medical Society Physicians Service was held in the Garden Room of the Providence Biltmore Hotel on Wednesday, March 22, 1972, at which time annual reports were received and approved. The members heard the President's report on the work and activities of the National Association of Blue Shield Plans of which he is a director.

The Corporation elected the following Board of Directors for three year terms each: Doctors Edmund T. Hackman, Frederick A. Peirce, Arnold Porter, and Stanley D. Simon. Dr. Thomas F. Head was elected to the unexpired term of Dr. Seebert J. Goldowsky who had resigned to become Medical Director of the Plan.

The Corporation also elected the following non-physicians for three year terms each: Chelcie C. Bosland, Ph.D., Emeritus Professor of Economics of Brown University; Daniel H. Ford, business agent of the United Rubber Workers (AFL-CIO), and Reverend Joseph L. Lennon, O.P., Vice President of Community Affairs at Providence College.

At its annual meeting on April 17, 1972, the Board of Directors elected the following as Officers of the Corporation:

Arnold Porter, M.D., President

Earl J. Mara, M.D., Vice President

Judge Florence K. Murray, Secretary

George W. Chaplin, Treasurer

The Board also elected the committees: Executive Committee, Professional Advisory, Finance, Conference, Claims and Nomination. All of these committees were active throughout the ensuing months in carrying forward the work of the Corporation. The Board held ten (10) meetings during the year, two of which were joint meetings with the Blue Cross Board of Directors.

During the year, the Corporation lost, by death, one of its incorporators, a member of the Board for many years, Dr. Rocco Abbate. Two former directors who contributed much to the development of the Corporation's progress died: Dr. Arthur E. Hardy and Mr. J. Austin Carroll.

Minutes of all Board meetings are regularly sent to the Corporation members and therefore, a detailed report of the year's activities is not warranted in this summary report.

Highlights of the year have been the successful negotiation of rate filings for all lines of business: The steady growth of the plan and the extension

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PROBLEMS AND PROGRESS IN IMMUNIZATIONS

Current procedures for immunization against the seven major immunizable diseases of childhood — diphtheria, tetanus, whooping cough, measles, mumps, poliomyelitis, and rubella — has made much progress and with it brought some problems.

Diphtheria and tetanus are two of the three components of the "baby shots". Diphtheria and tetanus vaccines are toxoids. The disease producing poison (toxin) is treated to make it a harmless toxoid. Whooping cough vaccine, the third component of the "baby shots", is a preparation of killed bacteria. Three doses of the "baby shots" (DTP) given at four to six week intervals are recommended at 18 months of age and prior to school entry. Whooping cough immunization is not recommended after the age of six years. Diphtheria-tetanus (DT) booster immunizations are recommended every 10 years during adult life.

Diphtheria occurs primarily in children, but may occur in all age groups. Three population groups are especially susceptible to tetanus. The first group consists of infants born at home where the umbilical cord becomes soiled and contaminated easily. This group may be protected against tetanus by making certain that the pregnant mother has adequate tetanus protection prior to delivery. Individuals using illicit drugs intravenously and with needles that are dirty and contaminated by tetanus bacteria comprise the second group. The third group comprises adult workers whose outdoor activities render them prone to injuries and wounds subject to contamination by tetanus bacteria.

More than 70 per cent of cases of whooping cough occur during the first year of life. Pneumonia is the most common complication and accounts for 90 per cent of the deaths in children under three years of age.

Measles vaccine, licensed in the United States in 1963, is a live, attenuated (tamed) strain of virus which is injected by syringe and needle. Immunization is recommended at age 12 months. All children by State regulation must be immunized before school admission. If the measles vaccine is given before age 11 months a repeat immunization is recommended 12 months later due to the low seroconversion protection rate (up to 40 per cent failures) with measles vaccine given before one year of age. One immunization after one year of age appears to confer protection for life.

Rubella (German measles) vaccine, licensed in the U. S. in 1969, is a live attenuated (tamed) strain of virus which is injected by syringe and needle. State regulation demands proof of immunization prior to school entry. Susceptible adult women who are not pregnant and who will not become pregnant in the subsequent two months should be immunized. A recently passed Rhode Island statute requires proof of adequate anti-rubella titer in addition to the usual serology test (tests are performed on the one blood sample by the Rhode Island State Department of Health) prior to issuance of the marriage certificate for all couples.

Rubella, a major problem because of its effect on unborn children, can cause death of the fetus or congenital damage including deafness, blindness, mental retardation, and heart defects. Its greatest risk is during early pregnancy. Ordinarily epidemic outbreaks of rubella can be expected every 6 to 9 years. The last outbreak in the United States was in 1964-65, when over 10 million cases were reported, resulting in 20,000 spontaneous miscarriages and stillbirths. An additional 20,000 children were born with congenital defects. The cost of educating one child damaged by rubella is estimated to be \$10,000 per year.

An outbreak of rubella expected in 1970-71 has not materialized to date. This may be attributable to the fact that from 1969 to 1972 over 50 million doses of rubella vaccine have been administered. This is the most rapid implementation of a new vaccine program in United States history. On the other hand in Bermuda, an island in the Atlantic ocean about 570 miles south east of Cape Hatteras, South Carolina, having a total area of about 21 square miles and a population of 50,000, did not use rubella vaccine in 1969, when it was first introduced. Bermuda with a disease epidemiological disease pattern similar to that of the United States experienced an epidemic of rubella in 1970-71. With the onset of the outbreak in Bermuda the entire island population was subsequently immunized. So far in 1972 case reports of rubella in Bermuda are almost nil. It would appear that rubella vaccine is an effective preventative of rubella and its complications.

Mumps vaccine is a live attenuated (tamed)

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strain of virus which is injected once at age 12 months or older. Because it has been but recently licensed, the duration of effectiveness while apparently good remains for time to determine. Because complications associated with the older diseases discussed are more serious in children, protection against them may be given priority in immunization schedules. Mumps vaccine is suggested for children approaching puberty, adolescents, and adult males who have not had mumps.

Combined measles-mumps-rubella vaccines are now available. Studies show that the combined vaccine given to children over one year of age has a seroconversion rate and protective effect equal to that of these monovalent vaccines given at the same time but at different sites. One administration of the combined vaccine is sufficient for protection, but if given to children under 11 months should be followed by a second injection one year later.

The first polio vaccine, the Salk vaccine, was introduced in 1955 and was given by a series of injections. It is an inactivated vaccine, and not recommended today. The Sabin polio vaccine is an oral live attenuated (tamed) vaccine and was introduced in 1961. It is taken by mouth on the familiar sugar cube or by dropper. Both monovalent and trivalent preparations have been used successfully but at the present time trivalent preparations

alone are available for routine immunizations and are equally effective as the original monovalent vaccines. Several doses of trivalent vaccine are needed to achieve ideal protection. Immunization should begin at two to three months of age. Two or three doses are given at six to eight week intervals during infancy with boosters at 18 months of age and at school entry. The polio vaccine may be conveniently integrated with the DTP schedule.

Routine smallpox vaccination is no longer recommended. All but four states (Rhode Island no longer requires proof of smallpox vaccination for entry into school) have dropped the smallpox requirement. At the present time smallpox has largely been eradicated in the world, except for small endemic pockets in the Far East and in South America.

The American Academy of Pediatrics through its 'red book' report of the Committee on Infectious Diseases will have the latest recommendations available in publication form by this Spring. Present trends are to combine vaccines to simplify immunization of children. Research is underway which will result in many more new vaccines during the next decade. It is imperative that the support of everyone interested in the health and welfare of children be enlisted if we are to be successful in eradicating all the infectious diseases of children.

SYNTHESIS OF PARATHYROID HORMONE

Workers at the National Institutes of Health, the Mayo Clinic, and the Ciba-Geigy Pharmaceutical Company have recently determined the chemical structure and have synthesized the biologically active portion of human parathyroid hormone.

These collaborative efforts have revealed significant differences between the chemical structure of human parathyroid hormone and that derived from animal sources. Sufficient quantities of the active component of the hormone have been synthesized for experimental studies of its role in calcium metabolism and metabolic bone disease, for the development of diagnostic assay procedures for its measurement in human blood, and for clinical investigation of its potential use as a therapeutic agent in human disease.

Details of the chemical structure of human parathyroid hormone, including the precise sequence of the amino acids in the active portion of the human parathyroid hormone, is now known. After deter-

mination of its structure the single-chain molecular fragment was synthesized by combining the constituent amino acids in the proper sequence. Animal tests have confirmed the biological activity of this synthetic peptide.

Parathyroid hormone is normally present in such small amounts (fresh parathyroid gland tissue contains only 50 parts per million as the hormone), that hormone-secreting tumors obtained at surgery were used as the source of hormone for these studies. Because of the nature of these tumors, two years and the cooperation of more than 150 institutions and individual physicians and surgeons in 12 countries were required to obtain the hundreds of frozen tumors required for an adequate yield of hormone.

Active purified fractions from extracts of these glands were prepared, from which 3.8 milligrams of the pure human hormone were isolated, enough to determine the amino acid sequence of the bio-

logically active region of the hormone (the first 34 of the 84 amino acids comprising the molecule).

Sequence determination was accomplished by subjecting the isolated hormone to sequential degradations whereby one amino acid at a time is "cleaved" off the chain, and identified by either gas chromatography or mass spectrometry. In the sequential degradations, performed automatically, amino acids are split off the parent molecule at a rate of one amino acid every two hours. The amino acid sequence of the biologically active portion of the human parathyroid hormone differed from the corresponding sequence of the bovine molecule by 6 and from the porcine hormone by 5 amino acid residues.

Parathyroid hormone and other polypeptide hormones circulate in blood in extremely low concentrations and, in general, are cumbersome if not impossible to measure using biological assay. This problem was circumvented in the late 50's and early 60's by Solomon Berson and Rosalyn Yalow when they developed radioimmunoassay to measure proteins in biological fluids. According to this technique, the hormone is injected into animals to stimulate the formation of antibodies. Animal serum containing these antibodies is harvested. Pure hormone, labelled with a radioactive compound, is combined with these antibodies and becomes bound to them. To a measured amount of this combination is added the blood sample for assay. The hormone in the blood sample displaces or frees some of the radioactive hormone. The resulting ratio of radioactive bound to free hormone

is an index of the amount of hormone contained in the blood sample.

The development of clinically useful radioimmunoassays for human parathyroid hormone has been difficult. It appears that at least one of the reasons for this has been the different amino acid sequences of human and animal parathyroid hormone. Until now, only parathyroid hormone from cattle and swine has been available for production of antisera against parathyroid hormone in experimental animals; and radioimmunoassays for human parathyroid hormone have depended upon the "cross-reaction" between these antisera and the human molecule. A second serious problem has been the complex metabolism of parathyroid hormone once it has been secreted from the gland into the blood. It appears that the 84 amino-acid hormone is cleaved into fragments by metabolic processes in peripheral organs(i.e. kidney and liver) and circulates in blood in multiple forms.

The determination of the amino acid sequence and the synthesis of the biologically active portion of the human hormone will now permit the development of a species-specific immunoassay based on the biologically active region of the human hormone. This assay will permit the systematic analysis of the level of active circulatory hormone under various physiological conditions, and the measurement of the biologically active hormone level in patients suspected of having parathyroid gland dysfunction.

This is indeed an important development in calcium metabolism.

LASER BEAM PRECAUTIONS

A recent state-federal survey in seven states found serious deficiencies in safety procedures in the use of lasers in high school and college science classes. The Bureau of Radiological Health of FDA jointly with state health agencies in Colorado, Florida, Illinois, Montana, Oklahoma, Pennsylvania, and Washington examined 288 lasers in use in those states. The survey was conducted in connection with the development by FDA of a laser safety performance standard. Under the law the standard can be required for newly manufactured equipment, but not for devices already in use.

Lasers are used in high schools and colleges to demonstrate principles of optical physics. The devices also have important research applications in

colleges and in industry and are widely used in construction for leveling and alignment.

In many cases, it was reported, laser beams were directed toward students or areas through which students might pass. Incredibly in a few instances high school students were exposed to direct laser beams deliberately. One instructor said he wanted students to see a beautiful effect. Lasers frequently were used in situations where beams could be reflected in the direction of students from windows or glass objects. Seventy-two per cent of lasers were operated without warning signs, and 59 per cent lacked warning labels.

A laser operating with a power output of 2 milliwatts — well within the power range of most of

the lasers measured during the survey — has been reported to have produced a burn in a human retina. Similar laser outputs have caused retinal burns in research monkeys. Microscopic changes in retinal cells can be observed after eye exposures to beams having optical radiant powers as low as 1/100 of that expected to produce visible retinal burns.

Among other safety precautions recommended by FDA are the following: (1) avoidance of direct laser viewing, (2) removal of objects with reflective surfaces from laser beam paths, (3) blockage

of the beam when it is not needed, (4) preparation and testing of laser demonstrations when students are not present, (5) use of key-locked switches to prevent the use of lasers by unauthorized persons, and (6) adherence to the practice of not leaving operable lasers accessible and unattended.

It is important that these precautions be brought to the attention of appropriate departments of schools, colleges, hospitals, and industries in the Rhode Island area to assure the safe use of this useful but deceptively powerful device.

SAFER X-RAY MACHINES

New radiation protection standards for diagnostic x-ray machines and components have been promulgated by the Food and Drug Administration to reduce unnecessary x-ray exposure for Americans.

The requirements are set forth in an FDA standard specifying improvements which manufacturers must make to reduce patient and operator x-ray exposures from diagnostic x-ray equipment produced after August 15, 1973. The standard appeared in the Federal Register of August 15, 1972.

Approximately 130 million Americans annually receive diagnostic x-rays, which is the chief source of man-made radiation exposure in the country.

The FDA standard will hopefully reduce substantially the importance of excessive beam size as a cause of unnecessary x-ray exposure by requiring that all types of equipment be capable of restricting the beam to the size of the x-ray film or fluoroscope receptor. In general-purpose stationary x-ray machines beam restriction would have to be effected either automatically or by devices to prevent the equipment from being operated until the beam is restricted manually.

Repeated x-ray examinations, a major cause of unnecessary exposure, will it is hoped, be diminished by the federal mandate that equipment in-

corporate specific features so that the operator can obtain a more consistent desired image quality at a given machine setting for voltage, current, and time. Film retakes and patient re-exposures occur frequently because operators take several films at different equipment settings to make sure of securing a usable picture.

The limit on the amount of leakage from x-ray tube assemblies reflects recommendations of national and international radiation protection authorities. Under certain circumstances, the leakage will not exceed 100 milliroentgens in one hour at a distance of one meter from the tube assembly.

X-ray equipment assemblers are regarded as manufacturers under the FDA standard. They will be required to certify that producers' instructions were followed and that certified components used in assembling equipment met the new criteria. Similar certifications must be made by physicians and other x-ray equipment users if they install or replace components produced under the standard.

The FDA effort to bring safer x-ray examination to the American people is indeed a worthy goal. It is particularly important where x-rays are used by personnel less sophisticated in the use of these powerful modalities such as podiatrists and chiropractors.

GEORGE W. WATERMAN CANCER DIALOGUE

FRIDAY, JUNE 8, 1973 — 11:00 A.M.

SOPKIN AUDITORIUM, THE MIRIAM HOSPITAL

CARCINOMA OF THE LUNG

— SPEAKERS —

HERMES GRILLO, M.D., Associate Clinical Professor of Surgery, Harvard Medical School
THE OPERABLE LESION

JULIUS WOLF, M.D., Professor of Clinical Medicine, Mt. Sinai School of Medicine
THE INOPERABLE LESION

President's Message

Each new President of this Society is faced with new approaches to what are probably ever present problems affecting both the Profession and the public generally. Each President recognizes clearly that without the assistance of each member of the Society, and without the generous help of the many committees of volunteers who accept the responsibility of screening the continuous volume of business affecting the medical profession and the provision of health care for the public, his task would be insurmountable.

Currently the major issue is the importance of amendments made in the closing weeks of 1972 by the 92nd Congress relating to the Social Security laws. Foremost among these amendments of greatest significance to the Medical Profession was the one establishing professional standards review organizations throughout the nation designed to improve quality and utilization review of health care.

Professional standards review organizations will be under the purview of the Secretary of Health, Education and Welfare who must designate the areas for each such organization by January 1, 1974. The organizations will have their expenses for operation underwritten by HEW, and they will be established with membership open to all doctors of medicine and doctors of osteopathy in any stated area. Until 1976 only organizations representing a substantial proportion of physicians in an area can be designated as PSROs.

It is immediately apparent that we have a responsibility to our membership to take an active and vigorous leadership for our state that we may comply with the federal legislation as well as demonstrate our ability to guarantee beyond doubt that not only Medicare and Medicaid patients, for whom the legislation was directed, but all citizens have been and are continuing to receive the highest quality of care.

Recognizing the need for prompt action, your Society has initiated the formation of a professional standards organization independent of the Society. The R.I. PSRO, INC. was incorporated as a non-business corporation with the Secretary of State of Rhode Island, with five doctors of medicine and one osteopathic physician as incorporators. These incorporators, with legal counsel, have drafted bylaws and have applied for recognition by HEW as the official PSRO for the Rhode Island area.

The next step will be that of seeking the individual participating support of every member of

May, 1973



EDMUND T. HACKMAN, M.D.
of Warwick

our Society, and of the state osteopathic Society, as members of the PSRO corporation. Every physician should cooperate by joining this new corporation when invited to do so. Under the law, physician organizations have priority in the establishment of a PSRO, and if no such organization exists in a region, after January 1, 1976 the Secretary of HEW can designate any qualified public or non profit organization to serve in such a role.

Initially PSROs will be required to review only institutional care. Later they will assume their full scope which will include review of professional activities of physicians and other health care practitioners, institutional and non-institutional providers for services and items paid for by Medicare, Medicaid, and Maternal and Child Health programs. Their review is to determine whether services and items are medically necessary, whether quality meets professionally recognized standards, and whether the facility in which the services were performed was appropriate.

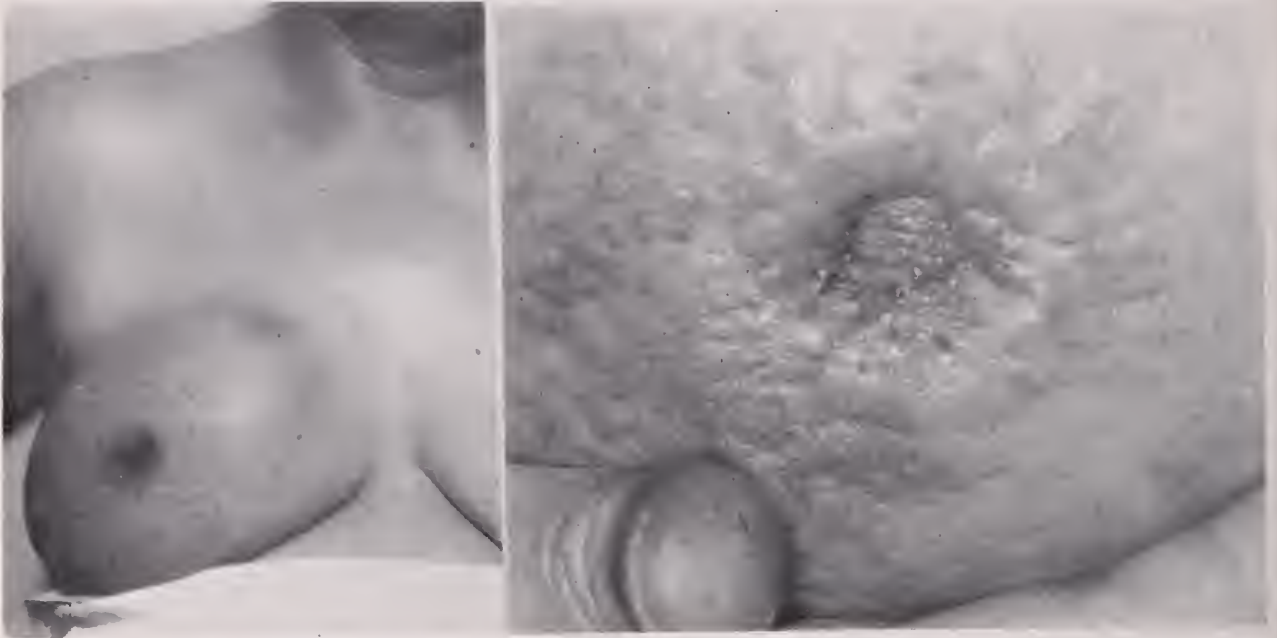
With every general hospital in Rhode Island subscribing to PAS and MAP auditing programs, and with an effective statewide Peer Review committee of the Society in action, plus utilization review committees in the hospitals, there is every reason to believe that the R.I. PSRO, INC. will be able to function from the very start to the complete satisfaction of the federal law, as well as any guidelines that may be established by the department of Health, Education and Welfare.

The opportunity is offered for every Rhode Island physician to play a major role in demonstrating that quality physician care of the highest standards exists in this area. We have accepted the challenge

EDMUND T. HACKMAN, M.D.
President

DERMAQUIZ

Conducted by Francesco Ronchese, M.D.



At right, the enlargement of the areola and retracted nipple of a breast neoplasm. The skin around the retracted nipple is made up of punctiform depressions and retractions, giving the appearance of the peel of an orange.

Answer on Page 208



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calls. We'll take them
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MEDICAL BUREAU
of the
Providence Medical Association

Polyps and Carcinoma of Large Bowel in South African Bantu

The South African Bantu has an unusual pattern of disease of the large bowel. For all practical purposes he does not have Crohn's disease, ulcerative colitis, or diverticulosis. Cancer of the large bowel is of extremely low frequency. This series of 96 cases was never associated with adenomatous polyps. In 14,000 autopsies, no adenomatous polyps were found. During a 12-year period only six adenomatous polyps were submitted to surgical pathology. The low incidence of carcinoma of the large bowel is undoubtedly environmental rather than generic. In direct contrast to the United States, the Bantu has an extremely bulky diet and increased frequency of defecation. The bacterial flora may also be important.

. . . Bremmer, CG, and Ackerman LV: Cancer 26:991, Nov. 1970.

* * *

Gallbladder Disease in Pima Indians

An American Indian population was investigated to determine the true prevalence of gallbladder disease, to examine its relationship to suggested etiologic factors, and to identify high-risk individuals. From an age-sex stratified random sample of 596 Pima Indians aged 15 to 74 years, those with clinically documented gallbladder disease were identified by review of medical records. An attempt was then made to examine the remainder of the sample by cholecystography. The overall prevalence of gallbladder disease was 48.6 per cent, which greatly exceeded that based on clinical diagnosis alone. The prevalence was significantly higher in females and increased with age in both sexes. No association was demonstrated between gallbladder disease and obesity, serum cholesterol level, diabetes, or parity. Pima women aged 15 to 20 years were shown to be at high risk of early development of gallbladder disease and to offer unusual opportunities for further epidemiologic and clinical studies.

. . . Sampliner, RE, et al: New Eng J Med 283:1358, Dec. 17, 1970.

* * *

Hodgkin's Disease in English and African Children

The histologic classification of Hodgkin's disease based on the Rye Conference was applied to

lesions in children in the Manchester region of England and to those of children in East Africa. There were statistically significant differences in the distribution of types of lesions, with African children having many more lesions of the lymphocytic-depletion type which has a less favorable prognosis. African children also differed significantly in this respect from French and Texan children. The reasons for this finding are obscure but may represent a less favorable reaction to the disease among African children.

. . . Burns, C, et al: J Nat Cancer Inst 4:37, Jan. 1971.

* * *

Cholelithiasis in Singapore

A study of 12,767 necropsies was undertaken to provide more information about the pattern of cholelithiasis in the Orient. In this series, there were 398 instances in which gallstones were demonstrated. The data derived from the study support the clinical studies which suggested that there was a relatively low over-all frequency, a high proportion of pigment stones, a common occurrence of choledocholithiasis, and an equal involvement of both sexes by this process.

This last quality may be the result of an association between opium addiction and cholelithiasis in the adult Chinese male. It suggests that opium abuse may be an important factor in the development of cholelithiasis in the Orient.

. . . Hwang, WS: Gut 11:41, 1970.

* * *

Changing State of Gallstone Disease in Japan

The long held impression that the composition of gallstones in Japan is gradually changing from the once predominant bile pigment to cholesterol, thus approaching that of the West, has been confirmed by actual chemical analysis of gallstone samples collected 40 years apart. Factors responsible for this change are not clearly known at present, but many include the rapidly proceeding urbanization and changing food habits in post-war Japan. These two groups of stones, that is, cholesterol stone and bile pigment stone, should be considered as two separate entities having different etiologies.

. . . Nakayama, F, and Miyake, H: Am J Surg

(Continued on Next Page)

Frontoethmoidal Encephalomeningocele in Thailand

In eight years, the authors studied 100 patients with encephalomeningocele in the anterior part of the head. Operation is advised to correct deformity, prevent progression of the lesion, and to anticipate erosion and infection. Neglected hydrocephalus, active infection, or possible brain damage constitute contraindications to operation. There was one operative death among 72 patients treated by operation.

Ingraham and Matson found reports of 187 encephaloceles as compared to 1,157 of spinal lesions. Of the encephaloceles, only 21 cases were in nasal, nasopharyngeal, and facial regions. There have been occasional reports of meningoceles in the anterior aspect of the head and in the nose, but the condition is considered a rarity in Europe and America. This is true also in Japan, Hong Kong, and Southern India. In Thailand, it is exceptionally common; 100 patients were seen in eight years at the authors' neurosurgical service. A high incidence is also found in Malaysia and Indonesia. Tandon reported a higher than average incidence at Lucnau, Northern India, but stated

that the incidence in New Delhi was low. For the African Negro in Nigeria, Odeku found six sincipital ones among 36 encephalomeningoceles. He also quoted Gupta, who found one encephalomeningocele among 4,220 births at a hospital in Ibadan, Western Nigeria. Acquaviva reported a large series of 39 patients with sincipital encephalomeningocele in Morocco. The incidence in Africa is therefore slightly higher than in Europe and America but is still lower than in Southeast Asia.

. . . Suwanwela, C; Sukabote, C; and Suwanweia, N: *Surgery* 69:617, April 1971.

* * *

Cancer of the Stomach in Korea

Carcinoma of the stomach has a very high incidence when compared with other forms of cancer seen in a rural Korean mission hospital. The peak age for men is 51 years and for women 42 years. Male to female ratio is three to one. There is a higher rate of stomach cancer among farmers than other segments of the population..

Koreans with stomach cancer seem to ingest significantly larger amounts of soya bean paste than persons of the same age and sex without stomach cancer. The fact that *Aspergillus flavus* is found in soya bean cakes raises the possibility that aflatoxins produced by this mold which grows on the soya bean cakes (from which soya bean paste is made) may be a possible etiologic factor in the high incidence of stomach cancer seen in 1,079 patients with stomach cancer in a 130 bed hospital in the seven year period from 1962 through 1968 in Southwest Korea. Further investigation is necessary to delineate the role of molds as a factor in stomach cancer as observed in the Far East. Epidemiologic studies of the significance of the consumption of soya paste as a factor in the frequency of cancer of the stomach in Korea is under study.

. . Whitaker, WG, Jr, and Shepard, D: *Am J Surg* 120:748, Dec. 1970.



ONE SENTENCE ESSAY Medicare Department

I can see pretty well with my spectacles, and hear pretty well with my hearing aid, and eat pretty well with my new teeth, and I'm getting used to wearing a toupee, and walking with a cane — but I do miss my mind!

. . . Quoted by Merlin K. Duval.

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Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Vigorous anticholinergic action — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5-mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis. In theory a curare-like action may occur, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

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The contraindications and precautions applicable to Pro-Banthine 15 mg. should be observed.

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American Medical Association
535 North Dearborn Street/Chicago, Illinois 60610



RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE

(Continued From Page 196)

BLUE SHIELD OF RHODE ISLAND

FINANCIAL STATEMENTS AS OF DECEMBER 31, 1971 AND 1972

STATEMENT OF INCOME AND EXPENSE:	Dec. 31, 1972	Dec. 31, 1971	Increase (Decrease)
INCOME:			
Received from Subscribers	\$24,385,507	\$21,339,826	\$3,045,681
Income from Investments	386,367	386,887	(520)
TOTAL INCOME	\$24,771,874	\$21,726,713	\$3,045,161
EXPENSES:			
Claims Payments			
Operating Expenses	\$22,632,783	\$20,179,185	\$2,453,598
	2,138,800	2,074,121	64,679
TOTAL EXPENSES	\$24,771,583	\$22,253,306	\$2,518,277
NET GAIN OR (LOSS) TO RESERVES	\$ 291	\$ (526,593)	\$ 526,884

COMPARATIVE BALANCE SHEET:

ASSETS:			
Cash in Bank and on Hand	\$ 297,908	\$ 366,000	\$ (68,092)
Accounts Receivable	943,090	529,653	413,437
Investments	6,119,883	6,614,030	(494,147)
TOTAL ASSETS	\$ 7,360,881	\$ 7,509,683	\$ (148,802)
LIABILITIES:			
Accounts Payable	\$ 549,910	\$ 1,231,846	\$ (681,936)
Accrued for Claims	4,747,837	4,377,609	370,228
Unearned Subscriptions	679,614	528,627	150,987
Other Liabilities	4,877	11,700	(6,823)
TOTAL LIABILITIES	\$ 5,982,238	\$ 6,149,782	\$ (167,544)
RESERVES:			
	\$ 1,378,643	\$ 1,359,901	\$ 18,742
TOTAL LIABILITIES AND RESERVES	\$ 7,360,881	\$ 7,509,683	\$ (148,802)

DISTRIBUTION OF BLUE SHIELD DOLLAR:

Claims Expense914	.929	
Operating Expense086	.095	
Added to Reserves000	(.024)	
TOTAL SPENT	1.000	1.000	

of coverages with a gradual phasing out of the original Plan A in favor of the more comprehensive coverages in Plan B and Plan 100; the development of the Bristol group plan and the program of the R. I. Group Health Association, the effective work of the Claims Committee and the development of the State Medical Society's Peer Review Committee; the wide range of issues resolved by the Professional Advisory Committee;

the adoption of a revised operation agreement between the Corporation and the Blue Cross Corporation; and the long range approach to current problems in the delivery of health care — with particular interest in Major Medical coverage and the possibility of extended coverage for the person temporarily unemployed when the original coverage is tied in with employment.

(Continued on Next Page)

BLUE SHIELD OF RHODE ISLAND
COMPARISON OF STATISTICS — YEARS 1971 AND 1972

	1972	1971	Increase or (Decrease)
Blue Shield Subscribers	720,983	704,323	16,660
People Served Under Government Programs (Medicare Part B)	103,056	100,721	2,335
People Served Under B/S Additional Programs (Major Medical, Extended Benefits, F.E.P.)	655,852	520,330	135,522
Firms With Blue Shield Coverage	3,917	3,795	122
Firms Buying Blue Shield For Employees	3,326	3,136	190
Benefit Payments Blue Shield	\$ 22,632,782	\$ 20,179,185	\$ 2,453,597
Benefit Payments Federal Programs	\$ 11,290,159	\$ 10,347,463	\$ 942,696
TOTAL BENEFIT PAYMENT	\$ 33,922,941	\$ 30,526,648	\$ 3,396,293
 Total Benefits Paid Since Start of Plan	 \$264,801,681	 \$230,878,740	 \$33,922,941
Total Assets	\$ 7,360,881	\$ 7,509,683	\$ (148,802)
Total Income	\$ 24,771,874	\$ 21,726,713	\$ 3,045,161
Total Reserves	\$ 1,378,643	\$ 1,359,901	\$ 18,742
Operating Expenses	\$ 2,138,800	\$ 2,074,121	\$ 64,679
Number of Blue Shield Cases Paid	1,039,015	926,679	112,336
Number of Cases Paid (Incl. Medicare)	1,422,758	1,261,593	161,165
Number of Participating Physicians	1,160	1,150	10

The Corporation is indeed fortunate in having such an active and conscientious Board of Directors and Committee Members who give generously of their talents and time in the interest of the people of the State of Rhode Island, and in its efficient and progressive executive leadership and staff support.

Respectfully submitted:
 JUDGE FLORENCE K. MURRAY
 Secretary

BLUE SHIELD OF RHODE ISLAND
TREASURER'S REPORT
YEAR 1972

During 1972, Blue Shield of Rhode Island continued to experience the growth pattern that has prevailed since the start of the Plan and reported a record high income of \$24,772,000, an increase of 14 per cent over 1971.

Several programs participated in the membership and income growth:

1. The "100" Contract experienced a 63 per cent increase in contracts and a 52 per cent increase in income.
2. The "65" Program experienced a 5 per cent increase in contracts and a 28 per cent increase in income.
3. The Major Medical Program experienced a

17 per cent increase in contracts and a 11 per cent increase in income.

Benefit payments for subscribers also reached an all-time high of \$22,663,000, an increase of \$2,454,000 over 1971. The most significant increase in benefit payments was made in the "100" Contract. The "65" and Major Medical Programs also experienced increased payments in proportion to their membership growth.

Operating expenses for 1972 increased \$65,000 or only 3 per cent over 1971, reflecting the factors of increased membership, increased claims volume, and increased operating efficiency.

The net result of operations, for all practical purposes, was a break-even situation for the year. The reserves at December 31, 1972 including the Maternity Liability are \$2,237,230 as compared to \$2,236,939 at December 31, 1971, a difference of \$291. The reserves represent 1.1 months of claims and operating expenses.

Respectfully submitted:
 For: GEORGE W. CHAPLIN
 Treasurer
 By: PAUL L. ROSSI
 Assistant Executive Director—
 Financial Affairs

✍ ✍ ✍

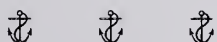
BLUE SHIELD AND NATIONAL HEALTH INSURANCE

(Concluded From Page 194)

this kind of thinking. The first is "To hell with them". The second is, "Let's just hang on until they take over". Both of these attitudes are unreasonably militant. They tend to reinforce the opinions of those who view physicians as reactionary and concerned with self-interest, or they invite confrontation with government in the public arena. In such confrontation it is a foregone conclusion who would win.

I would like to suggest a third attitude: One that we have already gone a long way toward demonstrating. It is an attitude that says, "We recognize government's proper role in protecting the rights and interests of the people in setting nationally uniform standards of excellence, and, in turn, government should recognize the demonstrated administrative expertise of Blue Shield, the significant contributions of the physicians who helped build it, and the necessity of continued professional guidance". Blue Shield and government should get together and create a health care system which retains many of the assets that already exist and one which would balance public responsibility with private and professional capabilities, using all the unique talents of the public, private, and professional sectors.

This is an attitude that will be held by those who will shape the future and control the process of change, rather than be victimized by it. I commend such an attitude to you.



PHYSICIAN OPPORTUNITIES SOUGHT

(Concluded From Page 180)

Chang T. Tsai, M.D.
564 B. Allenhurst Road
Buffalo, New York 14226
Urology

* * *

Chin-Ho Lin, M.D.
115 Browne Street
Brookline, Massachusetts 02146
Obstetrics and Gynecology

* * *

Trilok Khanna, M.D.
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R. I. PHYSICIANS ATTITUDE ON FUTURE PRACTICE OF MEDICINE

(Concluded From Page 191)

with respect to the problem oriented record keeping system. One might also make deductions with respect to the dissemination of new ideas in medical practice. Well over half of the physicians in Rhode Island are well acquainted with the problem oriented record system, and almost 20 per cent are using it. More than half would like to know more about it, desire and would attend related teaching programs. From Fig. 16 alone, one learns a great deal about continuing education, the diffu-

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sion of medical information, and the desires of physicians to improve themselves.

CONCLUSIONS AND PROJECTIONS

In response to anticipated changes in status during the next five years by age groups (Fig. 17), it is clear that the composition and attitudes of the Rhode Island Medical Society will alter through evolution. Of our fellow physicians who are currently 60 years of age or older, over 5 per cent will have retired. At the present time in the age group under 40 there is an approximately equal distribution as between group practice and solo practice. Regarding all groups under 60 years of age, in five years the majority of members of the Society will also be members of partnerships or groups. The Society must be prepared to consider effectively and to deal with the problems inherent in this changing pattern of practice.

Throughout this survey one's faith in one's self and in the organization has been reaffirmed. Despite the average age of the Rhode Island physician, which is over 50, he is dedicated to the proposition of quality care. This is seen in his high rate of certification, in the number of refresher courses he takes, in subscriptions to journals, in his accessibility and the coverage he provides, and in his attitude toward the annual physical checkup and multiphasic screening. But he is not smug, or self-sufficient, or self-satisfied. He indicates a willingness to participate in total prepayment plans sponsored by Blue Cross and Blue Shield as the agencies of his choice. He has seen their performance; he knows of their capabilities; he has confidence in the organizations. He is not averse to change; he is willing to change his records and his record keeping; and he is willing to make his records available. He is willing to enter into a capitation group in which there is reasonable equity of distribution and professional control.

This survey has allowed reassessment and reevaluation. By taking a hard look at ourselves and our attitudes we find that we are much more like what we thought we were, than some of the caricatures of us would indicate. We find no real crises; we recognize areas for possible improvement; we have reestablished our identity.



DERMAQUIZ ANSWER

(See Page 202)

The "orange peel" skin of the breast or "la peau d'orange" in sophisticated Franglais, a sign of breast cancer.

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of \$250. The primary objective of the Fund is to achieve long-term growth of capital. The Board of Directors of the Beacon Mutual Fund recently appointed Douglas T. Johnston & Co., managers of the Johnston Mutual Fund, as investment adviser and managers. You are invited to write for a prospectus. Please address inquiries to Beacon Investing Corp. Box #104, 7 Whittier Place, Boston, Massachusetts 02114

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Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruption, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

June 1973
Vol. 56, No. 6

BALCONY





Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Valium® (diazepam)

To help you manage excessive psychic tension

Rhode Island Medical Journal

JUNE, 1973

Volume 56, No. 6

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Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

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Tablets of 100 mg.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasias); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

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Opinion & Dialogue

"Prescription drugs – who should determine the maker?"

Dispenser of Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine..."

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will not have the expert knowledge of no more than

ld be an obligation of medical
tice...

"Medical societies ought to con-
tinuing campaigns to point
he substantial savings that could
ealized thru deductible insurance
protection for catastrophic ill-
. At the very least, they should, in
patients' interest, question the
cs of any insurance organization
raises health care costs by forc-
policyholders to buy insurance
may not need or want and prob-
won't ever use.

"Too many doctors are indiffer-
to the economic consequences of
decisions. Too many, for ex-
ple, habitually hospitalize patients
ne convenience of the MD. It's
ense to deny such habits exist...

"Doctors, thru their medical so-
cetes, have unhesitatingly appealed
eir patients for support in the
against government interference
t the private practice of medicine.
the public in the past has re-
ded. It's time the American Med-
Association and state and local
ical societies paid off the debt by
sive action to hold down the cost
medical care."

of Drugs

Insurance rates and hospital
ges are only two factors in health

care costs. The cost of drugs—both
prescription and nonprescription—is
another.

And when it comes to drug
costs, the nation's pharmacists are
concerned. Through their national
professional society, the American
Pharmaceutical Association, pharma-
cists are advising the public to use
nonprescription medication cau-
tiously and conservatively, and to seek
the advice of their pharmacist before
selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware
that when it comes to prescription
drugs, often he has an even greater
opportunity to reduce the cost to the
patient—with no sacrifice in the qual-
ity of the medication dispensed. But
in many states, outdated and anti-
quated laws prevent the pharmacist
from engaging in drug product selec-
tion. "Drug product selection" simply
means that the pharmacist functions
in the patient's interest by con-
sciously choosing, from the multiple
brands available, a low-cost quality
brand of the specific drug to be dis-
pensed in response to the physician's
prescription order.

Much *misinformation* has been
purposely spread by those who stand
to gain financially by maintaining

high drug costs to the public. An en-
less stream of propaganda has ema-
nated from the drug industry in an
effort to persuade the medical profes-
sion that these so-called anti-substitu-
tion laws should be retained. And as
long as these laws are retained, the
drug industry will continue its current
marketing practices which contribute
unnecessarily to high drug costs to
patients. These practices also are in-
viting government agencies to expand
their restrictive controls on physi-
cians and pharmacists.

APhA Efforts

As pharmacists, we are con-
cerned about health care costs. We
hope that every physician shares our
concern on this vital issue, and will
give his personal support to the con-
structive efforts APhA has undertaken
in the interest of all patients.

*(For a complete discussion of
drug product selection, you are invited
to request a free copy of the "White
Paper on the Pharmacist's Role in
Product Selection" from: American
Pharmaceutical Association,
2215 Constitution Avenue, N.W.,
Washington, D.C. 20037.)*

) drugs that he selects to treat the
priority of conditions encountered in
practice. Moreover, the physi-
s choice of a specific brand is
d on his knowledge of the pa-
s medical history and current
dition, and his experiences with
particular manufacturer's
uct.

Some substitution proponents
argued that the dispensing of a
cription is a simple two-party
action between the pharmacist
the patient, and that a substitut-
pharmacist may avoid even a
nical breach of contract by simply
ying the patient that he is making
ubstitution. I would judge that
courts would be sympathetic
rd a pharmacist who substituted
ut physician approval and who
rtook a legal defense that seeks
ake the patient responsible for
harmacist's actions.

ced Prescription Prices?

Substitution advocates are
esting to the consumer, and par-
arly the consumer activist, that
ced prescription prices could
w legalization of substitution.
ave seen absolutely no evidence
stify this claim. To the contrary,
rience in Alberta, Canada, where
stitution is authorized, suggests

the opposite.

Many pharmacists understand-
ably are concerned about the cost of
maintaining multiple stocks of similar
products. While there is no doubt that
inventory costs rise when additional
brands are stocked, it would be inter-
esting to know how much they rise,
and how many pharmacists actually
stock *all* brands—of, say, ampicillin
or tetracycline—or how long they
keep "slow moving" products on their
shelves before they are returned for
credit. To ask that the industry elimi-
nate multiple sources is to ask com-
petitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would
favor "corner cutting" pharmacists
and manufacturers. For them, free
substitution would be not a right, but
a license. As an aftermath, it is quite
likely that the confidence of both phy-
sicians and patients in the profession
of Pharmacy would be eroded, as
revelations about the unconscionable
behavior of an undisciplined few were
magnified in the press or in profes-
sional circles.

Summary

In short, what the American
Pharmaceutical Association advo-

cates as a broad-spectrum panacea
looks to us to be not only a minority
view (advocacy of substitution is by
no means a uniform policy in Phar-
macy), but also an extraordinarily
costly and ineffective remedy, whose
side effects are odious. We believe
(1) that an impressive majority of
pharmacists prefer to work with
Medicine and with industry, for the
consumer, and for the general good,
(2) that they seek the privilege to sub-
stitute when the patient might gain
and when the patient's doctor agrees,
and (3) that they seek to work for the
resolution of genuine grievances
openly and professionally.

*(For amplification of PMA views,
please write for our booklet, "The
Medications Physicians Prescribe:
Who Shall Determine the Source?"
It is available from: Pharmaceutical
Manufacturers Association, 1155
Fifteenth Street, N.W., Washington,
D.C. 20005.)*

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



It's about time somebody told the true story of the American Doctor.

You'd agree 100% on that. There have been too many of the other kind of story.

You know that the vast majority of American doctors are honest, hardworking, skilled and dedicated human beings who have the interests of their patients at heart.

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One of the many ways the AMA is doing it is through its special communications program.

Perhaps you've seen pages in newspapers and national magazines signed "America's Doctors of Medicine." They're part of this program. It tells the true story of what it takes to become a doctor. The ways American medicine has improved the public's health. And to express the profession's concern about health by providing information which will help every American lead a healthier life.

We're telling this story for you, the American doctor. If we are to continue to represent you effectively, we need your support.

Find out more about what the AMA does for you and the public. Send for the pamphlet, "The AMA and the American Doctor: Sharing a Common Goal." Write: Dept. DW, at the address below.

**JOIN US.
WE CAN DO MUCH MORE TOGETHER.**

American Medical Association
535 North Dearborn Street/Chicago, Illinois 60610



Peripatetics

SEEBERT J. GOLDOWSKY, Editor-in-Chief of this Journal, recently received recognition from representatives of the Medical Staff and the Board of Trustees of The Miriam Hospital for his many years of service to that institution and to the community which it serves. Norman Fain, President of the hospital, presented Doctor Goldowsky with a Miriam Hospital Chair and a framed letter of appreciation. Doctor Goldowsky is the first full time Medical Director for Rhode Island Blue Cross and Blue Shield.

* * *

HUGO TAUSSIG, Chairman of the Society's Committee on Mental Health, has been elected President of the Rhode Island District Branch of the American Psychiatric Association. Other officers chosen are: BEN W. FEATHER, vice-president; D. ROBERT FOWLER, secretary-treasurer; and NICOLAS NUNEZ, council member.

* * *

The following physicians have been elected as officers of the medical staff of Rhode Island Hospital: LOUIS A. LEONE, president; ROBERT V. LEWIS, president-elect; HERBERT FANGER, vice president; THOMAS McOSKER, treasurer. WARREN W. FRANCIS was elected to the executive committee for a two year term.

The following appointments to the staff have been made: Active — GEORGES PETER, pediatrics; GISELA W. RYAN, radiation therapy; CHARLES F. JOHNSON, Division of Plastic Surgery, Department of Surgery; WILLIAM A. O'NEILL, Pediatrics. Consulting Staff, GEORGES PETER, Medicine.

* * *

PETER KOCH has been named regional chairman for the Annual Fund Drive for Tufts University Medical School.

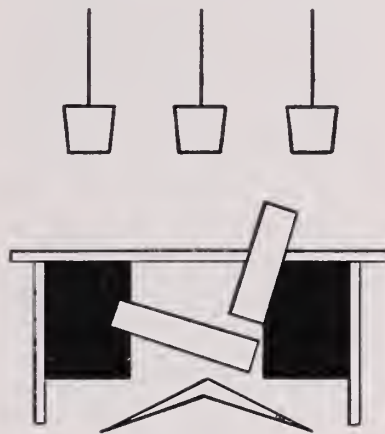
(Continued on Next Page)

ERRATUM: In the May issue of this Journal, a sentence in the Message From the Dean read: "Altogether there will be next fall 175 medical students in the three operational years of the M.D. program, 3 of them Rhode Islanders and 43 women. The sentence should have read: "... 38 of them Rhode Islanders and 43 women". The editors regret this error.

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Telephone: (617) 536-2121

The American College of Physicians has named MILTON W. HAMOLSKY to assume the responsibilities of Governor next year. He will serve as governor-elect for the next 12 months.

* * *

BLAS MORENO and DAVID QUIGLEY are members of a newly formed Radiation Team at The Memorial Hospital in Pawtucket.

* * *

GABRIEL A. NAJERA, Brown University Health Services Consulting Psychiatrist, has been appointed assistant clinical professor of Psychiatry at Brown University Division of Biological and Medical Sciences.

* * *

IRVING A. BECK has been elected to the Board of Governors of the American Osler Society. MARSHALL N. FULTON was elected to membership of that same Society.

* * *

ALFRED A. ARCAND has completed continuing medical education credits to remain in active membership in the American Academy of Family Physicians; the national association of family doctors requires 150 hours of accredited continuing medical study every three years for members to become eligible for re-election.

* * *

LORAND R. BROWN, medical chairman of the V. D. Clinic at Kent County Memorial Hospital, was the guest on a 30 minute WSVP radio show. The subject of the discussion was that institution's V. D. Clinic.

* * *

JOSEPH HANSAGI, chief of the Laboratory Service at Kent County Memorial Hospital, recently spoke to a group at the First Baptist Church in East Greenwich to recruit blood donors.

* * *

Medical staff officers elected for 1973 at Kent County Memorial Hospital are: DANIEL S. HARROP, president; RICHARD R. DYER, vice president; and PETER KOCH, secretary-treasurer. Medical chiefs reappointed to existing services are: PETER KOCH, anaesthesiology; JEANNETTE E. VIDAL, Home Care Service; JOSEPH HANSAGI, Laboratory; WILLIAM E. MCKENNEY, Medicine; WILLIAM F. GARRAHAN, orthopedic; BRIAND N. BEAUDIN, pediatric; JOHN M. VESEY, radiology; CHARLES B. ROUND, surgical; LORAND R. BROWN, obstetrics.

(Concluded on Page 250)

Malpractice protection is serious business!

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And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

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559-9

District County Medical Society Meeting

WASHINGTON COUNTY MEDICAL SOCIETY

The quarterly meeting of the Washington County Medical Society was held at the Larchwood Inn on January 10, 1973.

The meeting was called to order by Doctor Burbelo, President, at 11:45 a.m. Members present were Doctors: Agnelli, Ashley, Gobeille, Guthrie, W. Johnson, L. Johnson, Kraemer, Manganaro, Murdocco, McGrath, MacIver, J. O'Neil, Palaia, Ruisi, Siegmund, Soche, Tang, Walsh, Musselmen, and Eaton.

The minutes of the last regular meeting was read. It was moved by Doctor Ruisi and seconded by Doctor Walsh that they be accepted as read.

COMMUNICATIONS

A letter from Mr. Douglas McIntosh, Assistant Executive Director of Rhode Island Blue Shield, was read. It was decided to invite Mr. McIntosh to the next regular meeting to discuss problems physicians have with Rhode Island Blue Cross and Blue Shield and the reason why physicians as a group are placed in such a high category.

A letter from Mr. Douglas McIntosh, Vice President, Rhode Island Blue Shield, was read. It was decided to invite Mr. McIntosh to the next regular meeting to discuss problems physicians have with Rhode Island Blue Cross and Blue Shield and the reason why physicians as a group are placed in such a high category.

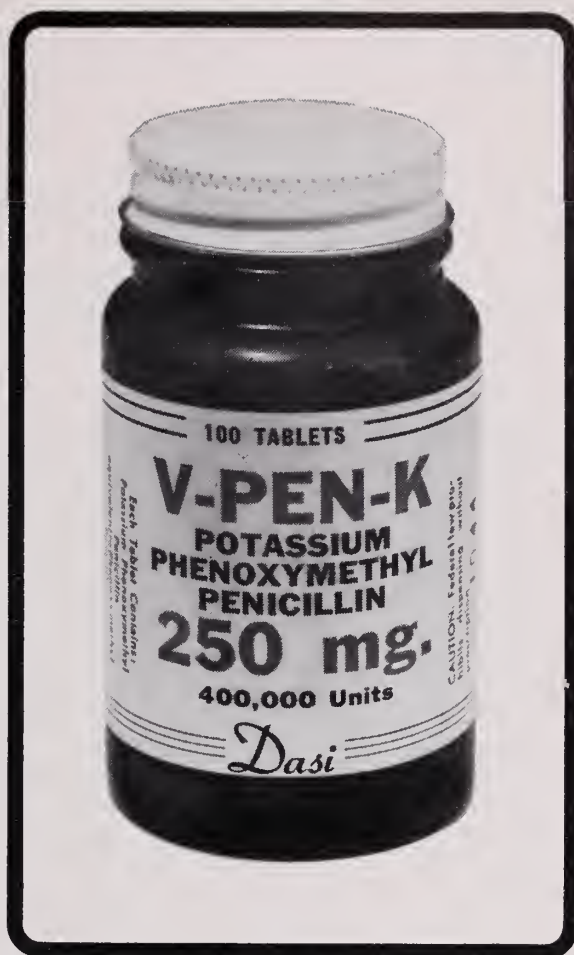
OLD BUSINESS

An attempt to go over revised By-Laws for the Society was begun. After many revisions, it was moved that the members receive a copy of the By-Laws as written. After each member has read them and offered some correction in writing it would be discussed again.

NEW BUSINESS

Doctor Guthrie brought up the problem of venereal disease at the University of Rhode Island. He stated the Rhode Island Board of Health recommended that the only effective means of prevention would be in the use of prophalactics. He asked that the Society support the University Health Service in the distribution of prophalactics at the University Infirmary. This was so moved by Doctor McGrath and seconded by Doctor Walsh. The Society voted in favor of this.

(Concluded on Page 250)



PRESCRIBE IT BY NAME

V-PEN-K

Potassium

Phenoxyethyl

Penicillin

250 mg. Tablets 400,000 units

GENERICALLY PRICED

DASI Pharmaceutical

PROVIDENCE, RHODE ISLAND

House Of Delegates Of The Rhode Island Medical Society

Report Of The Meeting Of January 24, 1973

A meeting of the House of Delegates of the Rhode Island Medical Society was held at the Rhode Island Medical Society Library on Wednesday, January 24, 1973. The meeting was called to order by the Speaker of the House, Dr. John Ham, at 2:10 p.m.

Members in attendance were: Doctors John C. Ham, Thomas F. Head, David Newhall, Carl V. Anderson, J. Douglas Nisbet, William J. O'Rourke, Charles B. Round, Joseph E. Wittig, David R. Hallmann, Thomas J. Martin, Erwin Siegmund, Leonard S. Staudinger, Robert V. Lewis, John A. Dillon, Edmund T. Hackman, Stephen J. Hoey, William J. MacDonald, Bertram H. Buxton, Jr., Joseph E. Caruolo, John A. Dillon, Joseph D. DiMase, Martin E. Felder, Donald P. Fitzpatrick, Frank Giunta, Herbert F. Hager, Charles L. Hill, Vincent I. MacAndrew, Peter Mathieu, Jr., P. Joseph Pesare, James A. Reeves, Guy A. Settupane, Richard P. Sexton, George H. Taft, William R. Thompson, Elihu S. Wing, Seebert J. Goldowsky, and Arnold Porter, M.D.

Also present were Dr. Earl J. Mara, Councillor from Pawtucket and a past President of the Society; Charles Clapp, Legal Counsel; John E. Farrell, Executive Secretary, and Edward J. Lynch, Assistant Executive Secretary.

Members absent were: Doctors Robert E. Baute, Charles S. Dotterer, Frederick Peirce, Jr., Richard G. Bertini, Paul J. M. Healey, Philip J. Lappin, A. John Elliot, James A. McGrath, Joseph L. C. Ruisi, Francis L. Scarpaci, J. Gerald Lamoureux, John P. Grady, D. Richard Baronian, Nathan Chaset, George V. Coleman, Dominic L. Coppolino, Joseph L. Dowling, Jr., Herbert Ebner, Martin Feldman, David Freedman, Edward J. Gauthier, Constantine S. Georas, Milton W. Hamolsky, John B. Lawlor, Henry M. Litchman, Samir G. Moubayed, Raul Nodarse, Ralph F. Pike, Robert P. Sarni, Wilson F. Utter, Armand D. Versaci, and Joseph E. Cannon.

MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the Sep-

tember meeting of the House had been prepared and distributed by the Secretary.

Action: A motion was made, seconded and voted that the minutes of the House meeting of September 20, 1972, as submitted, be approved and placed on record.

REPORT OF THE SECRETARY

Dr. Stephen J. Hoyer, Secretary, noted that his report was printed in the handbook for the meeting. He called attention to the call for the next House meeting for Wednesday, March 7, at 2 p.m. at the Medical Library, with the Corporation meeting of Physicians Service immediately following at 5 p.m. at the Blue Cross building.

Discussion ensued on the following items in the report of the Secretary:

5. *Ad Hoc Committee on Federal Grants*

Dr. Robert V. Lewis explained that the Council had established this committee because of the tremendous amount of tax money flowing into the State for various health and welfare programs, and the need for the Society to be aware of the use of such funds and the achievement of programs funded.

24. *Fiske Essay Fund*

Doctor Goldowsky suggested the possibility of commissioning writers to prepare articles for the RHODE ISLAND MEDICAL JOURNAL on a paid basis as possible use for the Fiske Fund allowance for essays.

27. *Professional Services Review Organization*

Doctor Lewis reviewed the reasons for forming such a corporation and he called attention to the draft for a nonbusiness Rhode Island PSRO, Inc. included in the handbook for the meeting. He stated that by authority of the Council he had named himself, and Drs. Edmund T. Hackman, Stanley D. Simon, Thomas F. Head, and Alton Paull as incorporators, and he had invited the state osteopathic association to name one of its members to be an incorporator also.

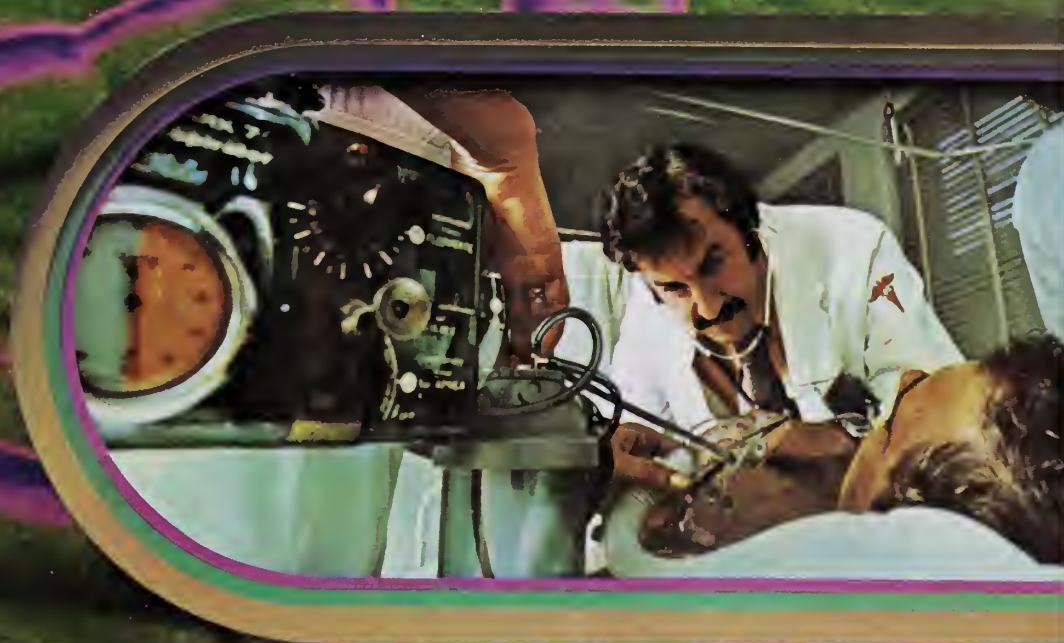
(Continued on Page 215)

Schering

On all in-patient
services...

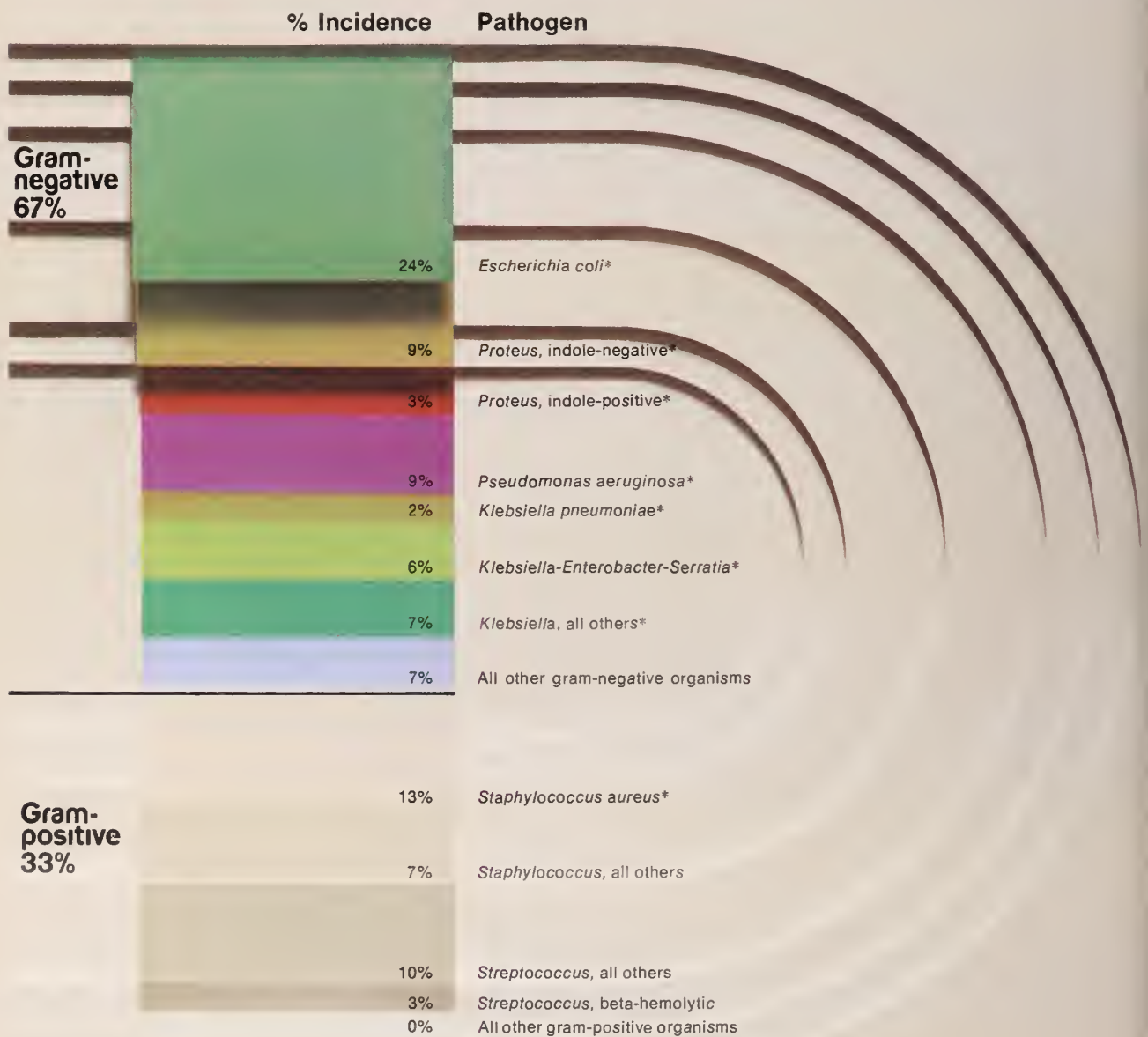
a major problem

2 out of 3
nosocomial infections
are gram-negative



Gram-negative bacteria magnified 10,000 times—color-tinted

Commonly encountered pathogens on all hospital services



Total pathogens 21,972
Source: Gosselin Audit of Pathology Cultures—1971

*GARAMYCIN Injectable is effective against susceptible strains of the pathogens indicated

A highly appropriate spectrum for today's problem pathogens

GARAMYCIN Injectable offers a high probability of effectiveness against susceptible strains of seven out of seven major gram-negative pathogens. These are:

Escherichia coli
Proteus, indole-negative
Proteus, indole-positive
Pseudomonas aeruginosa
Klebsiella
Enterobacter
Serratia } species

GARAMYCIN Injectable has also been shown to be effective in serious staphylococcal infections. It may be considered in those infections when penicillins or other less potentially toxic drugs are contraindicated and bacterial susceptibility testing and clinical judgment indicate its use.

Start with Garamycin

■ Broad gram-negative spectrum

Because of its broad gram-negative spectrum and its well-established clinical efficacy, GARAMYCIN Injectable can be considered for initial therapy in suspected as well as documented gram-negative sepsis.

Stay with Garamycin

■ Susceptibility of causative organisms confirmed

The results of susceptibility tests will, in most cases, demonstrate the causative organisms' sensitivity to GARAMYCIN Injectable. However, the decision to continue therapy with this drug should also be based on the severity of the infection and the important additional concepts contained in the Warning Box.

■ Relatively low incidence of adverse reactions

Risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

■ Bacterial resistance has not been a problem

In the laboratory, resistance has been demonstrated to develop slowly in stepwise fashion. No one-step mutations to high resistance have been reported to date.



On all in-patient services...

Garamycin[®]

gentamicin sulfate

Injectable

I.M./I.V.

40 mg. per cc.

Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin

serious gram-negative infections (pneumonia, urinary tract infections, septicemia, and wound infections)*
 *effective against susceptible organisms

WARNING

Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

Ototoxicity, both vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment.

Monitoring of renal and eighth nerve function is recommended during therapy of patients with known impairment of renal function. This testing is also recommended in patients with normal renal function at onset of therapy who develop evidence of nitrogen retention (increasing BUN, NPN, creatinine or oliguria). Evidence of ototoxicity requires dosage adjustments

or discontinuance of the drug.

In event of overdose or toxic reactions, peritoneal dialysis or hemodialysis will aid in removal of gentamicin from the blood.

Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic and/or nephrotoxic drugs, particularly streptomycin, neomycin, kanamycin, cephaloridine, viomycin, polymyxin B, and polymyxin E (colistin), should be avoided.

The concurrent use of gentamicin with potent diuretics should be avoided, since certain diuretics by themselves may cause ototoxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity.

USAGE IN PREGNANCY Safety for use in pregnancy has not been established.

On all in-patient services...
in hospital-acquired gram-negative infections*

Garamycin®

gentamicin sulfate

Injectable

I.M./I.V.

40 mg. per cc.

Each cc. contains
gentamicin sulfate equivalent
to 40 mg. gentamicin

Also available:
GARAMYCIN® Pediatric Injectable, 10 mg. per cc.

GARAMYCIN® Injectable, brand of gentamicin sulfate U.S.P., injection, 40 mg./cc. Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin
For Parenteral Administration

WARNING

Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

Ototoxicity, both vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

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Monitoring of renal and eighth nerve function is recommended during therapy of patients with known impairment of renal function. This testing is also recommended in patients with normal renal function at onset of therapy who develop evidence of nitrogen retention (increasing BUN, NPN, creatinine or oliguria). Evidence of ototoxicity requires dosage adjustments or discontinuance of the drug.

In event of overdose or toxic reactions, peritoneal dialysis or hemodialysis will aid in removal of gentamicin from the blood.

Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic and/or nephrotoxic drugs, particularly streptomycin, neomycin, kanamycin, cephaloridine, viomycin, polymyxin B, and polymyxin E (colistin), should be avoided.

The concurrent use of gentamicin with potent diuretics should be avoided, since certain diuretics by themselves may cause ototoxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity.

USAGE IN PREGNANCY Safety for use in pregnancy has not been established.

INDICATIONS GARAMYCIN Injectable is indicated, with due regard for relative toxicity of antibiotics, in the treatment of serious infections caused by susceptible strains of the following microorganisms:

Pseudomonas aeruginosa, *Proteus* species (indole-positive and indole-negative), *Escherichia coli* and *Klebsiella-Enterobacter-Serratia* species.

Clinical studies have shown GARAMYCIN Injectable to be effective in septicemia and serious infections of the central nervous system (meningitis), urinary tract, respiratory tract, gastrointestinal tract, skin and soft tissue (including burns).

Bacteriologic tests to determine the causative organisms and their susceptibility to gentamicin should be performed.

Bacterial resistance to gentamicin develops slowly in stepwise fashion; there have been no one-step mutations to high resistance.

In suspected or documented gram-negative sepsis, GARAMYCIN may be considered as initial therapy. The decision to continue therapy with this drug should be based on the results of susceptibility tests, the severity of the infection, and the important additional concepts contained in the Warning Box. In the neonate with suspected sepsis or staphylococcal pneumonia, a penicillin type drug is usually indicated as concomitant antimicrobial therapy.

GARAMYCIN Injectable has been shown to be effective in serious staphylococcal infections. It may be considered in those infections when penicillins or other less potentially toxic drugs are contraindicated and bacterial susceptibility testing and clinical judgment indicate its use.

CONTRAINDICATIONS A history of hypersensitivity to gentamicin is a contraindication to its use.

WARNINGS See Warning Box.

PRECAUTIONS Neuromuscular blockade and respiratory paralysis have been reported in the cat receiving high doses (40 mg./kg.) of gentamicin. The possibility of these phenomena occurring in man should be considered if gentamicin is administered to patients receiving neuromuscular blocking agents such as succinylcholine and tubocurarine.

Treatment with gentamicin may result in overgrowth of nonsusceptible organisms. If this occurs, appropriate therapy is indicated.

ADVERSE REACTIONS

Nephrotoxicity: Adverse renal effects, as demonstrated by rising BUN, NPN, serum creatinine and oliguria, have been reported. They occur more frequently in patients with a history of renal impairment treated with larger than recommended dosage.

Neurotoxicity: Adverse effects on both vestibular and auditory branches of the eighth nerve have been reported in patients on high dosage and/or prolonged therapy. Symptoms include dizziness, vertigo, tinnitus, roaring in the ears and hearing loss. Numbness, skin tingling, muscle twitching, and convulsions have also been reported.

Note: The risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

Other reported adverse reactions, possibly related to gentamicin, include increased serum transaminase (SGOT, SGPT), increased serum bilirubin, transient hepatomegaly, decreased serum calcium; splenomegaly, anemia, increased and decreased reticulocyte counts, granulocytopenia, thrombocytopenia, purpura, fever, rash, itching, urticaria, generalized burning, joint pain, laryngeal edema; nausea, vomiting, headache, increased salivation, lethargy and decreased appetite, weight loss, pulmonary fibrosis, hypotension and hypertension.

DOSAGE AND ADMINISTRATION GARAMYCIN Injectable may be given intramuscularly or intravenously.

For Intramuscular Administration:

PATIENTS WITH NORMAL RENAL FUNCTION*

Adults: The recommended dosage for GARAMYCIN Injectable for patients with serious infections and normal renal function is 3 mg./kg./day, administered in three equal doses every 8 hours.

For patients weighing over 60 kg. (132 lb.), the usual dosage is 80 mg. (2 cc.) three times daily. For patients weighing 60 kg. (132 lb.) or less, the

usual dose is 60 mg. (1.5 cc.) three times daily.

In patients with life-threatening infections, dosages up to 5 mg./kg./day may be administered in three or four equal doses. This dosage should be reduced to 3 mg./kg./day as soon as clinically indicated.

*In children and infants, the newborn, and patients with impaired renal function, dosage must be adjusted in accordance with instructions set forth in the Package Insert.

For Intravenous Administration:

The intravenous administration of GARAMYCIN Injectable is recommended in those circumstances when the intramuscular route is not feasible (e.g., patients in shock, with hematologic disorders, with severe burns, or with reduced muscle mass).

For intravenous administration, in adults, a single dose of GARAMYCIN Injectable may be diluted in 100 or 200 cc. of sterile normal saline or in a sterile solution of dextrose 5% in water; in infants and children, the volume of diluent should be less. The concentration of gentamicin in solution, in both instances should normally not exceed 1 mg./cc. (0.1%). The solution is infused over a period of 1 to 2 hours.

The recommended dose for intravenous administration is identical to that recommended for intramuscular use.

GARAMYCIN Injectable should not be physically pre-mixed with other drugs, but should be administered separately in accordance with the recommended route of administration and dosage schedule.

HOW SUPPLIED GARAMYCIN Injectable, 40 mg. per cc., 2 cc. multiple-dose vials for parenteral administration.

Also available, GARAMYCIN Pediatric Injectable, 10 mg. per cc., 2 cc. multiple-dose vials for parenteral administration.

APRIL, 1972
AHFS Category 8:12.28

For more complete prescribing details, consult Package Insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Professional Services Department, Schering Corporation, Kenilworth, New Jersey 07033.

HOUSE OF DELEGATES REPORT

(Continued From Page 214)

Action: A motion was made, seconded and voted to approve of the report of the Secretary as submitted.

REPORT OF THE TREASURER

The Speaker called attention to the complete report of the Treasurer as presented in the handbook for the meeting, and he noted that the financial records would be subject to professional audit.

Action: A motion was made, seconded and voted that the report of the Treasurer, as submitted, be approved and placed on file.

REPORT OF TRUSTEES OF BENEVOLENCE FUND

The Speaker noted that the financial report for 1972 of the Benevolence Fund had been submitted by the Trustees, and had been reviewed and approved by the Council.

Action: A motion was made, seconded and voted that the report of the Trustees of the Benevolence Fund, as submitted, be received and placed on file.

RECOMMENDATIONS FROM THE COUNCIL

The Secretary presented the recommendations from the Council as published in the handbook for the meeting. The following actions were taken:

1. *Spring Meeting of the House*

Action: A motion was made, seconded and voted that the House meet on March 7, 1973 at 2 p.m. at the Medical Library.

2. *Physician Service Directors*

Action: A motion was made, seconded and voted that the following physicians be nominated to the Corporation of Physicians Service for three-year terms each on the Board of Directors of that Corporation: Doctors Joseph E. Caruolo, William J. MacDonald, Earl J. Mara, and John J. Walsh.

3. *Revision of Bylaw Amendments*

Action: A motion was made, seconded and voted that the House approve of the clarification of the proposed bylaws as submitted by the Council and as set forth in the handbook for this meeting.

ELECTION OF THREE PHYSICIANS TO THE PROFESSIONAL ADVISORY COMMITTEE OF PHYSICIANS SERVICE

The Speaker noted that the House is authorized under the bylaws of the Physicians Service Corporation to elect three physicians to serve for one year on the Professional Advisory Committee of

(Continued on Next Page)

Hopkins

Profile "20"

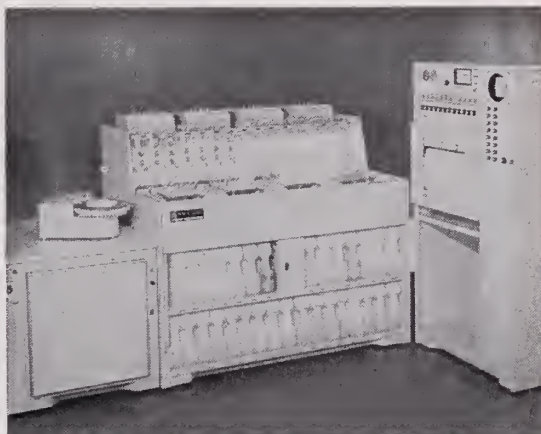
Results in Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES

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ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

that organization. He noted that the physicians whose terms are expiring are Doctors J. Robert Bowen, John F. Gilman, and John P. Grady.

The House placed in nomination Doctors Bowen, Gilman, Ham, and Grady.

Action: A motion was made, seconded and voted that nominations be closed.

On a written ballot Doctor Bowen was declared elected, and a tie vote was recorded for Doctors Gilman, Ham, and Grady.

Doctor Ham withdrew his name from the list of nominees, and the House declared Doctors Gilman and Grady elected to serve with Doctor Bowen.

RESOLUTION ON FREE STANDING AMBULATORY OPERATING FACILITIES

Doctor Charles Hill addressed the House on the resolution submitted by himself and Doctors R. W. Pearson and Francis L. McNelis. He reviewed the development of the ambulatory center by Dudley Associates citing the cost saving factors for the public as regards hospitalization costs, and the desire to provide a facility for all qualified surgeons in the area to use for ambulatory surgical services. He discussed the development of guidelines by the Council on Medical Service of the

American Medical Association to which he was a consultant.

Action: A motion was made, seconded and voted that the resolution, as submitted, be adopted.

RESOLUTION: CHARLES P. WILLIAMSON

Doctor Lewis presented a resolution to Charles P. Williamson who died in December, 1972, and he cited his great service as legal counsel and friend of the Society for more than two decades.

Action: A motion was made, seconded and voted that the resolution, as submitted, in the handbook, be accepted.

RESOLUTION: ACUPUNCTURE

Doctor Lewis noted that increasing publicity being given in the news media of the practice of acupuncture, and he offered a resolution for consideration of the House. The resolution was discussed and it was amended with the Resolve to read:

"Therefore, Be It Resolved that the House of Delegates of the Rhode Island Medical Society, assembled in meeting on January 24, 1973, declares that acupuncture should be performed in Rhode Island for investigative purposes until it is established by scientific research that it is an ethical and proper treatment, and it should be performed only by physicians licensed to practice medicine and surgery in this State; and further, the House urges that the Rhode Island Department of Health give favorable consideration to this opinion in the interest of the health and the safety of the citizens of the State."

Action: A motion was made, seconded and voted that the resolution on acupuncture, as amended, be adopted.

REPORT OF DELEGATES TO THE A M A

The Speaker noted that the Society's delegates to the American Medical Association had filed a report on the actions taken at the Clinical Session at Cincinnati in November, 1972, and this report was published in the handbook of the meeting for the information of the House.

REPORTS OF COMMITTEES

Peer Review

Doctor Goldowsky suggested editorial changes on page 4 of the report to read "Professional Activity Study" (PAS) instead of "professional audit system", and to read Medical Audit Program (MAP), and to add (CPHA) after Commission on Professional and Hospital Activities.

Members questioned the immunity of members serving on peer review committees, and legal coun-

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Medicare Participating



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed
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sel was asked to review that problem and report to the Society.

Annual Meeting

Doctor Lewis stated that his Presidential Address at the Annual Meeting would be on the results of the poll of the membership on the present and future practice of medicine in Rhode Island.

Child-School Health

Doctor Mathieu stated that the new periodic screening program discussed in the report was mandated by federal regulation. He stated that the examination form would be revised and improved as suggested by the Committee.

Drug Abuse

Doctor Lewis commended the Committee for its extraordinary work in preparing possible legislation which has been submitted to the Governor who has agreed to discuss it with Society representatives. He also reported that the Council had authorized the publication of a booklet on drug addiction treatment facilities prepared by the Committee.

Nursing

Doctor Head noted a changing attitude by nurses in an effort to upgrade their assignments to those of physician assistants.

Aging

Objection was voiced to the report on aging that it did not represent any Society action but was mainly a recital of Senator Pell's activities.

The Speaker noted that other reports were included in the handbook, but none called for any specific action by the House.

Action: On individual motions the following reports were received and approved:

Emergency Medical Services
Liaison Committee with Brown University
Scientific Work and Annual Meeting
Continuing Medical Education
Child-School Health
Medical Aspects of Sports
Drug Abuse
Nursing
Statewide Committee on Peer Review
Alcoholism

Action: A motion was made, seconded and voted that the report of the Committee on Aging, as submitted, be received and placed on file without approval.

COMMENDATION OF RETIRING A M A DELEGATES

Doctor William J. MacDonald noted that Dr. Edmund T. Hackman was retiring as Delegate and

Dr. Seebert J. Goldowsky as Alternate Delegate to the American Medical Association, and he commended them for their outstanding service for many years, and moved that the House give them a rising vote of appreciation.

The House rose in applause of Doctors Hackman and Goldowsky.

ADJOURNMENT

The meeting of the House was adjourned at 3:40 p.m.

Respectfully submitted:

STEPHEN J. HOYE, M.D.

Secretary

REPORT OF THE SECRETARY

Stephen J. Hoye, M.D.

The Council has held two meetings since the previous meeting of the House of Delegates, and it reports the following as major actions taken:

1. *Employed Physicians of Rhode Island*

It heard a report on the problems of the Employed Physicians Association of Rhode Island, and it voted that the Council record its opinion that any group of employed Rhode Island physicians, in principle, have the right to engage in collective bargaining.

2. *Delegates to State Meetings*

(Continued on Next Page)

INTER NOS . . .

Just between us,

Local group plans have demonstrated a record of strength and stability that is rarely matched by programs more geographically spread.

This is merely to suggest that the first line of defense in economic security planning should include your R.I.M.S. official sponsored disability income plans.

Complete insurance planning begins here.

R. A. Derosier Agency

Group Administrator for R. I. Physicians Since 1949
"Treating The Whole Patient" Thru These Affiliates

FOURDEE AGENCY, INC.

(Indiv. Ins. Planning)

FOURDEE PLANNING CORP.

(NASD Broker-Dealer)

215 Waterman Ave., E. Prov. 02914 438-0660

The President was authorized to appoint delegates to represent the Society at the annual meetings in 1973 of neighboring New England state medical associations.

3. *Nominating Committee*

The President was authorized to name a nominating committee to present a slate of nominees for the positions open as directors of the Rhode Island Medical Society Physicians Service.

4. *House Meeting in January*

Approval was given for the House of Delegates to meet on January 24, 1973 at the Medical Library at 2 p.m.

5. *Ad Hoc Committee on Federal Grants*

The President was authorized to appoint an Ad Hoc Committee to address itself to the matter of Federal funds coming into the State for health programs with the supervision maintained closely by the administering agency with minimum input by the local community.

6. *Seminar on Incorporation*

The Council commended the Officers of the Industrial National Bank for the outstanding seminar staged for Rhode Island physicians on the subject of professional incorporation.

7. *Insurance Department Decision on Malpractice Insurance Rates*

The Council was informed of the decision of the Insurance Division of the State Department of Business Regulation relative to an increase in professional liability insurance rates in Rhode Island.

8. *Chiropractors Under Medicare*

The President was commended for notifying Congressman Mills of the Society's objection to allowing chiropractors to treat Medicare beneficiaries prior to enactment of the legislation in the final days of the Congressional session. (Subsequently a provision was enacted that stipulates that chiropractic services may be compensated when limited to "manual manipulation of the spine to correct a subluxation demonstrated by x-ray to exist".)

9. *National Leadership Conference*

The President, President-elect, the delegate to the AMA, and the executive secretary were named to represent the Society at a special national leadership conference called by the AMA for February 14-16 at Chicago.

10. *March House of Delegates Meeting*

With the Corporation meeting of Physicians Service scheduled for 5 p.m. at the Blue Cross building on Wednesday, March 7, 1973, the Council set the date for the House of Delegates meet-

ing in March for the same date, with the meeting at the Medical Library at 2 p.m.

11. *Osteopaths on Continuing Medical Education Committee*

Approval was given for extending an invitation to the State Osteopathic Association to name two of its members to serve with the Medical Society's committee on Continuing Medical Education, and also for inclusion of osteopathic members in any PSRO program to be drafted for consideration in 1973.

12. *R. I. Group Health Association Advertising*

Recommendations of the President that newspaper advertisements of the R. I. Group Health Association be brought to the attention of members of the Society on the staff of RIGHA as representing an unethical procedure involving them, and also that an Ad Hoc Committee be appointed to provide information to the Society on the actual scope of services being provided by RIGHA, and on its sources of financial support, were approved.

The President notified all the members of the Society who are employed by the R. I. Group Health Association that their support of the ad-

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(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

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Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
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vertising for new members by the Association constitutes unethical medical practice, and he urged each to prevail on their administrative officers to desist in such advertising tactics. He received letters from three of the physicians expressing agreement with the Society's position as conveyed to them.

13. *Investment Change*

Approval was voted of a stock change in the Society's investment portfolio as made by the Trust Department of the Industrial National Bank.

14. *Interagency Council on Smoking*

The President was authorized to seek members who are willing to serve as representatives of the Society on the Interagency Council on Smoking, and to make appointments.

15. *President's Letter to General Assembly*

The President directed a letter to each member of the 1973 R.I. General Assembly expressing the interest of the Society in health and welfare legislation, in particular, and its willingness to aid any legislator in preparing legislation involving medical issues.

16. *Delegates to the Council of the N. E. Medical Societies*

The appointment of the following members as the Society's delegates to the Council of the New England Medical Societies was approved: Doctors Robert V. Lewis (president-elect of the N. E. Council); William J. MacDonald, Edmund T. Hackman, John A. Dillon, Stephen J. Hoyer, and Francis B. Sargent.

17. *Chiropractic Advertising in South County*

The Council was informed that protests had been made regarding chiropractic advertisements in the South County Shopper, and that the State Health Department had been asked to take definitive action in the matter.

18. *Unethical Use of Physician's Writings by Pharmaceutical Company*

The Council was informed of the action of a pharmaceutical company in publishing abstracts from a book written by Dr. Henry T. Randall as part of advertising copy which was distributed to physicians. Doctor Randall did not give permission to either his publisher, or the pharmaceutical company for the use of his text material, and he has protested the action.

19. *The Problem of Malpractice*

The Council was informed of a meeting of the officers of the Society, and representatives of the legal profession, and of the St. Paul Insurance

(Continued on Page 242)

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Reemphasis On Tuberculosis

Negative Chest X-ray Findings And Sputum Do Not Exclude Tuberculosis

By Jean K. Ashba, M.D., and Milton W. Hamolsky, M.D.

Tuberculosis (TB) is still a public health problem, especially in large urban centers. At the monthly death conferences of the Medical Service of the Rhode Island Hospital we have found that each year three or four cases of pulmonary and other forms of tuberculosis were not recognized during life. This observation is disturbing, because tuberculosis is one of the few "curable" diseases in medicine; if left unsuspected it serves as a potential source of infection to the hospital personnel and the continuing dissemination of the disease in the community. As clinicians, our primary responsibility for and contribution to the control of this disease is to recognize its unusual presentations as a lead to diagnosis and, ultimately, therapy. For that purpose this paper will attempt to present some of the clinical pitfalls in the diagnosis of tuberculosis.

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ACTIVE TUBERCULOSIS WITH A NEGATIVE CHEST X-RAY

Patients are often hospitalized with a diagnosis of fever of unknown origin. The reader is reminded that tuberculosis is still the leading infectious cause of fever of unknown origin.¹ In these patients the disease is disseminated, and the tuberculin skin test is negative in 40 per cent of the cases. If one waits for chest x-ray changes or abnormal physical signs in the lungs, 40 per cent or more of the cases may be missed.² If the disease remains undiagnosed long enough, miliary infiltrations will appear. In such cases the liver is frequently involved, and one may note impaired liver function. The BSP test, serum alkaline phosphatase, and prothrombin time are often abnormal. One should therefore look for the organism not only in the sputum and gastric aspirate, but also in liver biopsy and bone marrow biopsy. In 163 cases of miliary tuberculosis from the literature, needle biopsy of the liver was found to be a valuable early diagnostic procedure in 75 per cent of the cases.³

Acute forms of miliary tuberculosis have been described in the literature with depressed blood formation which varies from a simple leucopenia affecting mainly the granulocytes to agranulocytosis and pancytopenia.⁴ We have seen patients presenting with thrombocytopenia and leukemoid reaction, so that the disease may easily be misinterpreted as a malignant blood disorder. Both

(Continued on Next Page)

conditions may, however, coexist, and TB has been reported in about 4 per cent of patients with myeloid leukemia.⁴ The syndrome of disseminated intravascular coagulopathy has been also reported in association with miliary tuberculosis.⁵

A much less frequent cause of pulmonary tuberculosis with negative chest x-ray findings is endobronchial tuberculosis. In sporadic reports in the literature such patients present with cough, with or without hemoptysis. The sputum is positive for acid fast bacilli, and yet the chest x-ray study is negative.⁶

CASE REPORT I

E.F., a 51 year old plumber, felt well until two months prior to admission to the Rhode Island Hospital, when he developed an influenza-like syndrome: prostration, non-productive cough, and fever as high as 103° periodically. He sought medical advice after one week because of persistent cough and sore throat. An ear, nose and throat consultation was obtained with the recommendation of a course of penicillin and sulfa drugs. He remained ill with fever, cough and a rapidly progressing dyspnea; he also lost 16 pounds weight in six weeks. A chest x-ray study revealed bilateral diffuse fine mottling. He was allowed to remain at home for a period of two weeks and had a repeat x-ray examination which was essentially unchanged. He was then referred to the hospital on 2-23-71 for further study. A pertinent finding in his past history was an orchiectomy — done five years previously for a chronic epididymitis. Biopsy revealed granuloma consistent with tuberculosis. Culture for acid fast bacillus (AFB) was negative, and chest x-ray study was also negative at that time. This was not followed by antituberculous chemotherapy.

Physical examination revealed a well nourished, well developed white male in obvious respiratory distress. Blood pressure was 140/70, pulse 130, temperature 102° C, respirations 36. The positive findings were bronchovesicular breath sounds over both lung fields with no rales. The liver was enlarged and was felt 15 cm. below the right costal margin.

Laboratory work on admission: Urine, VDRL, blood glucose, BUN, creatinine, electrolytes, bilirubin, proteins, LDH, SGOT, PTA, were all within normal limits. ANA titer and CSF were normal. CBC: hemoglobin 10.7 gm per cent, WBC 7,300/mm³ with 76 per cent neutrophils, 2 per cent band forms, 17 per cent lymphocytes, 1 per cent metamyelocytes. The platelet count was estimated

to be less than 5,000. The arterial blood showed PO₂ 53, PCO₂ 23, TCO₂ 17, pH 7.49, indicating hypoxemia with respiratory alkalosis. The pulmonary function tests revealed a pattern of restrictive lung disease: Vital capacity 1.9 L, one sec. vital capacity 95 per cent, peak flow rate 380/L-min, single breath CO diffusion 9 ml/min (N=24).

Sputum smear was negative for acid fast bacilli, and routine culture grew normal bacterial flora. PPD test with 5 TU (tuberculin units) and a repeat after 48 hours were negative. Gastric washings and urine for AFB, bone marrow, and liver biopsy were ordered. Bone marrow biopsy was negative for AFB; it showed, however, a granulocytic depression with adequate megakaryocytes. Needle biopsy of the liver showed miliary tuberculous granulomata. The three urine samples were negative. Two out of three gastric washings showed a few AFB. Culture of the gastric washings were reported subsequently as positive for myobacterium species. The niacin test was inconclusive and catalase test was not performed.

By the eighth hospital day he developed a purpuric rash. On the day after blood and platelet transfusions and hydrocortisone, the hemoglobin was 11.0 gm per cent, WBC 9800 with 80 per cent neutrophils, 5 per cent band forms, 4 per cent lymphocytes, 6 per cent monocytes, 2 per cent metamyelocytes, and 2 per cent myelocytes; platelets 2000. The next day total WBC was 6,600 with 79 per cent neutrophils, 5 per cent metamyelocytes, and 2 per cent myelocytes; platelets 10,000. The fibrinogen and factor VIII levels were elevated, thrombin time was normal, and partial thromboplastin time was shortened, ruling out a consumption coagulopathy.

The patient was placed on daily isoniazid (INH) (600 mg), streptomycin (1 gm), ethambutol (900 mg), and prednisone (40 mg). He tolerated his treatment quite well, temperature returned to normal, dyspnea subsided, and platelet count rose to 100,000 within two weeks. The blood count was watched carefully, and throughout the course of his thrombocytopenia he had no problem tolerating the medications. By the 33rd hospital day, he suddenly developed a sore throat. CBC showed total WBC/1400-mm³ with 8 per cent neutrophils, 64 per cent lymphocytes, and 28 per cent monocytes. Platelet count was 152,000. Bone marrow biopsy showed a maturation disturbance of the granulocytic series. The picture was attributed to INH toxicity to the bone marrow, which was

already depressed from the toxemia of the disease. Isoniazid was discontinued and substituted by para-amino salicylic acid (PAS). The total WBC varied between 1100-1600 for one week before it returned to normal.

Comment: This case demonstrates the importance of liver biopsy in the diagnosis of miliary tuberculosis and the possible development of thrombocytopenia and granulocytic depression secondary to the toxemia of the disease, as well as to the chemotherapy used.

LOWER LOBE TUBERCULOSIS

When a pulmonary infiltrate is present in the lower lung field only, the diagnosis of TB is not usually considered a major possibility. In fact, this location is unusual for pulmonary tuberculosis, the incidence being 0.5 to 4 per cent of sanatorium admissions in the United States, with an average of 1.5 per cent.⁷ The disease is common in young subjects in their third and fourth decades of life, with a higher incidence in females, blacks, and diabetic patients. In contrast to upper lobe tuberculosis, the lower lobe disease is usually acute, and the toxemia is more evident, so that an acute bacterial or viral infection is usually the dominant consideration. Although the radiographic changes are not specific, segmental or lobar consolidation, collapse, and hilar lymph node enlargement have been frequently observed; it is also rare for the disease to be bilateral. This is in keeping with the widely accepted view that lower lobe tuberculosis is caused by invasion or rupture of a caseous lymph node into a lower lobe bronchus. In support of this theory is the very high frequency of endobronchial tuberculosis found on bronchoscopy of these patients.⁸ The high incidence of hilar node enlargement, 18 of 30 cases in one series,⁹ points to a recent pulmonary infection.

THE SCAR OF OLD DISEASE AND THE COMPROMISED HOST

The chest x-ray cannot necessarily be considered to be an accurate index of the activity of tuberculous infection. If acid fast bacilli are not recovered on routine sputum examination and other pathogens are isolated, tuberculosis is erroneously ruled out from the differential diagnosis, based chiefly on a reported "inactive" or "healed" tuberculosis. On post mortem examination of patients who died from unrelated conditions, such as pulmonary embolism or congestive heart failure, study of presumably "healed" or "inactive" lesions frequently show AFB by smear and culture. Such old "inactive" lesions can often flare up and disseminate

in the body during conditions of diminished resistance. The reactivation of tuberculosis under corticosteroid therapy, in diabetics, and in patients with malignant diseases is well known.

SIGNIFICANCE OF NEGATIVE TUBERCULIN TEST

Not long ago tuberculin tests were fairly straightforward. A negative reaction to a properly applied intermediate strength PPD essentially "ruled out" tuberculosis from further consideration, with the exception of the following: disseminated and overwhelming forms of tuberculosis; viral exanthematous disease, and live virus vaccination; sarcoidosis and the myeloproliferative disorders including Hodgkin's disease; marked debility; and prolonged corticosteroid therapy. In our experience, however, adult patients with active tuberculosis may not be sensitive to an intermediate strength PPD (5 TU), yet do not appear overwhelmed by the disease. But when retested one to two weeks later, either using the same dose or a second strength (100 TU), they may show a positive reaction.

Suppression of the tuberculin test has also been observed in old people who are not acute ill.¹⁰ Using the Heaf multipuncture tuberculin test in 3,026 persons, about half of whom were aged 60 or over, a decline in sensitivity was observed with advancing age beyond age 50. Those who were tuberculin negative still showed a normal immediate type skin reaction. There was also a diminished capacity to achieve and maintain a tuberculin conversion after BCG vaccination in 124 persons, most of whom were elderly. These observations raise the question whether a waning immunity to tuberculin occurs with aging.

A false negative skin reaction to tuberculin is also related to different antigens used, the method of preparation and injection of the material, and the interpretation of the results. This is well illustrated in a recent study¹¹ in which patients with active tuberculosis were skin tested with 5 TU of three different tuberculin preparations: the commercial antigen, the standard PPD, and the PPD stabilized with Tween-80. A false negative reaction occurred in 49, 34, and 17 per cent respectively.

In conclusion, one negative skin test with 5 TU cannot be relied upon to exclude tuberculosis with certainty. The test should be repeated at one week intervals and one should not hesitate to use a second strength PPD before considering the test as negative.

CASE REPORT II

R.T., a 57 year old female was known to have

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Fig. 1. P.A. view showing a "spot" 5 mm. in diameter in the left lung.

rheumatic heart disease, diabetes mellitus, and nutritional cirrhosis. She was admitted to the Rhode Island Hospital in October, 1970 because of fever, abdominal pain and night sweats for one month. Physical examination revealed blood pressure 150/70, pulse 100, T 101, respirations 16. Physical signs were normal over the lungs. The heart rhythm was irregular, with a diastolic mitral murmur and a grade III/VI systolic murmur along the left sternal border. There was an obvious hepatosplenomegaly with tenderness over the liver. Extensive laboratory work was not remarkable except for a 46 mm sedimentation rate, and *E. coli* grown from the urine. Temperature was 100-101° C for four days, then subsided without specific treatment. An upper gastrointestinal series and barium enema were negative. Chest x-ray study (Fig. 1) revealed a "spot" 5 mm in diameter in the upper half of the left lung field. The PPD test (5 TU) was negative, (reading 2 mm induration after 48 hours). The lung lesion was interpreted as a scar of an old nonspecific inflammatory process.

She was readmitted eight months later, 6/14/71, with cough, hemoptysis, and fever. Physical examination this time revealed dullness, diminished breath sounds and rales over the base of the left lung. The chest x-ray film (Fig. 2) revealed opaci-



Fig. 2. P.A. and Lateral view of the chest eight months later showing an opacity involving the dorsal segment of the left lower lobe.

fication of the superior segment of the left lower lobe, including the lesion observed eight months earlier. Sputum smear showed gram + cocci. The PPD test with 5 TU planted on 6/15 was negative after 48 hours. One out of three sputum samples showed a few acid fast bacilli. On 6/21 bronchoscopy was negative for malignancy and bronchial washings were negative for AFB. Subsequently one out of three other sputum samples showed a few acid fast bacilli. Other organisms isolated were staphylococcus, aureus and streptococci. Viral serologic studies were negative. A course of penicillin was given without improvement after one week.

In the differential diagnosis, bronchogenic carcinoma, nonspecific pneumonia, and aspiration lung abscess were considered because of the negative tuberculin test. The few AFB observed were considered to be atypical mycobacteriae. The patient was, however, treated with three antituberculosis drugs. On 7/3 a second strength PPD with 100 TU gave a positive reaction, while 5 TU of PPD-B (Battey) gave a negative reaction. The sputum cultures subsequently grew *M. tuberculosis* which were niacin and catalase positive.

Comment: Although the diagnosis of pulmonary tuberculosis was entertained, other conditions were more seriously considered on account of the negative tuberculin test and the location of the lesion. This case illustrates the fact that the PPD test may be negative while the sputum is positive for acid fast bacilli in patients who are not necessarily overwhelmed by the disease, and that a second strength PPD is justified to bring out a positive reaction. It also clearly demonstrates that "minimal changes" seen on a chest x-ray film with either a positive or indeterminate tuberculin reaction represent a common pattern of tuberculosis

that is too often demonstrated only in retrospect.¹² The contention is that the minimal inactive lesion is often either active at the time or will be active soon thereafter.

Doctors D. Calenda and F. Duffy kindly allowed us permission to publish the two reported cases.

REFERENCES

- ¹Petersdorf RG, Beeson PB: Fever of unexplained origin: Report on 100 cases. *Medicine* 40:1-30, Feb 61
 - ²Proudfoot AT, Akhtar AJ, Douglas AC, et al.: Miliary tuberculosis in adults. *Br Med J* 2:273-6, 3 May 69
 - ³Brunner K, Haemmerli UP: Needle biopsy of the liver in the early diagnosis of miliary tuberculosis. *Ger Med Mon* 9:372-7, Sep 64
 - ⁴Oswald NC: Acute tuberculosis and granulocytic disorders. *Br Med J* 2:1489-96, 14 Dec 63
 - ⁵Goldfine ID, Schachter H, Barclay WR, et al.: Consumption coagulopathy in miliary tuberculosis. *Ann Intern Med* 71:775-77, Oct 69
 - ⁶Sheon RP, Van Ommen RA: Fever of obscure origin. Diagnosis and treatment based on a series of 60 cases. *Am J Med* 34:486-99, Apr 63
 - ⁷Cherry HH: Basal onset of reinfection tuberculosis. *Am J Roentgenol* 59:82-6, Jan 48
 - ⁸Segarra F, Sherman DS, Rodriguez-Aguero J: Lower lung $\frac{1}{2}$ eld tuberculosis. *Am Rev Resp Dis*. 87:37-40, Jan 63
 - ⁹Pratt-Johnson JH: Observations on lower lobe tuberculosis. *Br J Dis Chest* 53:385-9, Oct 59
 - ¹⁰Johnston RN, Ritchie RT, Murray IHF: Declining tuberculin sensitivity with advancing age. *Br Med J* 2:720-4, 21 Sep 63
 - ¹¹Holden M, Dubin MR, Diamond PH: Frequency of negative intermediate-strength tuberculin sensitivity in patients with active tuberculosis. *N Engl J Med* 285:1506-9, 30 Dec 71
 - ¹²Green RA: Clinical patterns of pulmonary tuberculosis. In Johnson JE editor: *Rational Therapy and Control of Tuberculosis*. 3rd edition. Gainesville, University of Florida Press, 1970. Pp. 50-2
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One Sentence Essay

Too many people still see the hospital as the place where "the best people in town" sit on the board, where some of the best-educated and most highly-trained people in our society earn high status and much income, where a huge physical plant dominates the neighborhood, where hundreds if not thousands of people work, and where the only room in the parking lot is in the restricted area dotted with Cadillacs.

. . . Sheldon Garber, Hospital Public Relations Consultant (Perspective, Blue Cross and Blue Shield Magazine, Vol. 6, No. 4, 1972)

WASHINGTON IRVING UPDATED

A modern day Rip Van Winkle fell asleep in 1972 and did not awaken until 1992. On awakening, he telephoned his stock broker to check on his securities. "Your IBM is now worth \$34,000 a share," said his broker. "Your AT&T is \$24,500 a share; your General Motors is \$22,000 a share."

You can imagine our hero's joy until the operator cut in: "Beg your pardon, sir; please deposit \$5,000 for the next three minutes."

From *The Quarterly Observer*, Brown University, Providence, Rhode Island, Summer, 1972.

Localization Of The Placental Site With Chromium⁵¹-Tagged Erythrocytes

Method Is Recommended For Reliability, Simplicity, Convenience, And Low Radiation Exposure To Mother And Fetus

By Patrick A. Broderick, M.D., and Wayne A. Cotnoir, R.T., A.R.R.T.

Antepartum bleeding, especially during the third trimester of pregnancy, invariably presents the physician with a major diagnostic problem. Placenta previa, which occurs approximately once in every 200 pregnancies,⁷ although its suspected incidence is considerably higher, is one of the more common conditions responsible for hemorrhage during this period of pregnancy. It is thus of paramount importance to localize accurately the position of the placenta in order to determine correctly the subsequent management of the obstetrical patient.

The clinical diagnosis of placenta previa is usually made by vaginal (intracervical) digital examination, a procedure not lightly undertaken for a variety of reasons. Any method which allows

this diagnosis to be made reliably without the necessity for vaginal examination must be considered advantageous. The most commonly used procedures in this regard are those involving radiographic and isotopic studies, while the advent of sonography has added another valuable dimension with significant applications in this field. Radiologic determination of the placental site by soft tissue, contrast, or displacement techniques has about a 95 per cent accuracy rate.⁶

In general, isotopic methods of determining placental localization are based on the concept that maternal blood flows slowly through the placenta and pools in the placental sinusoids. When the maternal blood cells are tagged with a suitable radioactive isotope location of the placenta will become manifest as a local accumulation of the tracer, which can be outlined by surveying the abdomen with an appropriate detector.

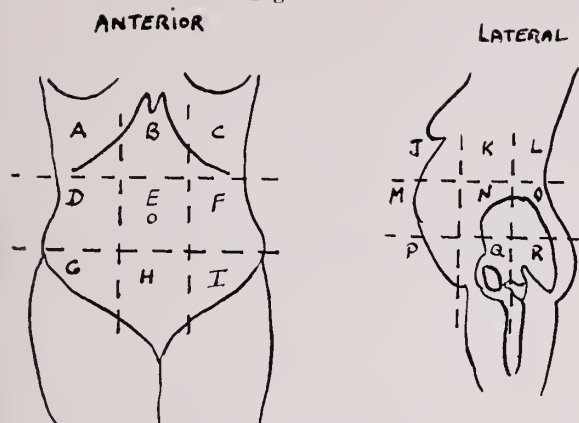
MATERIAL AND METHODS

Over a 10 year period 117 patients underwent radioisotopic placental localization examination. The vast majority of these patients were in the third trimester of pregnancy and were hospitalized following at least one episode of painless vaginal bleeding. In 93 cases the clinical data and follow-

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Figure 1



up information were sufficient for statistical evaluation. Twenty-one patients who were at an early stage of pregnancy (nine to 20 weeks) were examined in the initial stages of the study before it was realized that proper establishment of spacial relationships was necessary for accurate interpretation. Two patients had abortions early in pregnancy, and one case was lost to follow-up.

Equipment for each examination included two 30 ml syringes, one vial containing 10 ml of ACD solution, one syringe with 25 microcuries of chromium⁵¹ (sodium chromate), one 2 ml syringe, and one ampule containing 100 mg of ascorbic acid. The patients were examined with a single probe Picker Magnascaler.[®]

Under sterile technique 10 ml of acid-citrate-dextrose (ACD) solution were withdrawn into the syringe and 5 ml discarded. Using the same syringe 20 ml of the patient's blood were withdrawn and mixed with the residual ACD solution. The mixture was then re-injected into the ACD vial. Twenty-five microcuries of chromium⁵¹ (sodium chromate) were added, and the mixture allowed to incubate for 30 minutes, gently shaking the vial at approximately 10 minute intervals. At the end of the incubation period, 50 mg of sterile ascorbic acid were added (to reduce any remaining unbound hexavalent chromium⁵¹ (sodium chromate) to the trivalent state, which will not tag red cells). The patient was then positioned for an anterior view. The solution from the ACD vial was injected, and the residue was then used to peak the single probe. (The scaler was set for three minute counts, the discriminator set for the energy level of chromium⁵¹ and the high voltage was adjusted to achieve maximum count rate.) The patient's abdomen was divided into nine sections as shown on the placentagram work sheet

(Fig. 1). The probe was positioned over each section beginning with section H (counted first to avoid high counts due to urinary bladder collection of radioisotope), and the remaining eight segments were then counted alphabetically from A through I. Each section was counted for three minutes, and the resulting count recorded on the corresponding section of the work sheet. On completion of all nine counts the lowest count was used as background and subtracted from the remaining eight. These derived numbers were recorded on the work sheet, and the three highest counts were circled. The patient was subsequently positioned for a lateral view, and three three minute counts were taken over the anterior, central, and posterior projections, these projections corresponding to the highest counted section in the anterior view. Following completion of the lateral counts the lowest count was used as background and subtracted from the remaining two sections. These numbers were then recorded in the diagram. The highest count was circled. The diagram was then interpreted by the attending pathologist.

RESULTS

Of the 93 patients, 73 had no placenta previa at delivery; 20 patients had total, partial, or marginal placenta previa. A diagnosis of placenta previa was made by placentagram interpretation in 19 of the 20 patients subsequently found to have placenta previa. A diagnosis of no placenta previa was made in 74 instances (Fig. 2). The findings were confirmed by either manual intrauterine extraction at delivery or by direct visualization during cesarean section. There was one false negative diagnosis. However the placentagram on this patient was done during an earlier hospital admission when the patient was still in the second trimester of pregnancy and was interpreted as being probably negative at that time. At cesarean section a complete placenta previa was found.

DISCUSSION

While attempting to measure uterine blood flow in 1950, Browne and Veall¹ observed that radioactive sodium injected into the uterine wall facili-

Figure 2

	Placentagram Diagnosis	Confirmed Clinical Diagnosis
Placenta Previa	19	20
No Placenta Previa	74	73
Total	93	93

tated detection of the placental site. The technique of placental localization however remained clearly investigative until a suitable tracer — Iodine 131 — labelled human serum albumin became available. A variety of other radionuclides has since been employed for this purpose including 87m Sr, 11C, 51Cr, 99m Tc serum albumin and 113m In transferrin.² The examination has become an accepted and reliable clinical test. It is easy to perform and affords the minimum inconvenience to the patient. There is slight hazard to either the mother or fetus. The results can be plotted out as a placentagram, or localization can be obtained by scanning or by dynamic imaging procedures. The latter are now being more widely used with the ready availability of more sophisticated equipment. The accuracy of the procedure has stood the test of time no matter which method is used.

Fundal implantation and total placenta previa are easily recognized. The "low-lying" placenta can usually be distinguished from partial placenta previa by its position and configuration in the lateral view in particular. In the series by Johnson et al.³ three false positive results occurred in patients having "low-lying" placentas. The findings were interpreted as being consistent with partial placenta previa in these patients. Of their three false negative results two occurred in patients having marginal or partial placenta previa. In a third patient a total placenta previa was misdiagnosed as low subfundal implantation. Five of these six patients were examined between five and 14 weeks before delivery and the authors were of the opinion that premature examination (before spacial relationships of the mature placenta and the term uterus are established) resulted in the diagnostic errors. On the basis of our own experience we would tend to agree with this observation. As a matter of fact it is probably not worthwhile to accept patients for placental localization prior to the 35th week of gestation. It should also be remembered that large leiomyomata may disguise or obscure the precise localization of the placenta.⁴ James et al.² emphasized that detection of the "low-lying" placenta does not necessarily mean that the patient has either a marginal placenta or placenta previa and that the diagnosis could be much more specific and accurate if a marker were used to localize the external orifice of the cervical canal.

In interpreting placental images it must be remembered that a number of other structures will be delineated by radiopharmaceuticals localized to

blood pools. The uterine wall itself is often clearly demonstrable in scans, as are the uterine veins. The placental blood pool is the region of greatest activity within the confines of the uterus. In scans the uterine veins are usually seen as ovoid or spherical concentrations of radionuclide generally located on the lateral wall. The appearance of the distribution of radioactivity in the placenta should be uniform; areas of decreased activity may well be due to infarction.

SUMMARY

A series of 117 obstetrical patients with a history of painless vaginal bleeding were subjected to radioisotopic placental localization. Among 93 patients suitable for evaluation, 20 had placenta previa and 73 did not. The studies yielded one false negative result. The diagnostic reliability (97.8 per cent in this series) is considered excellent, and the test is recommended because of its relative simplicity, convenience for the patient, and low radiation exposure to mother and fetus. No preparation of the patient is necessary prior to injection of the tagged red cells, and the isotope remains in the maternal circulation, as the crossing of erythrocytes through the placental barrier is either questionable or negligible.⁵ The procedure is particularly recommended since it allows the elimination of the possibility of placenta previa without having to resort to vaginal examination and may enable the physician to discharge from hospital many patients with episodes of antepartum hemorrhage to await term delivery.

REFERENCES

- ¹Browne JCM, Veall N: Method of locating the placenta in the intact human uterus by means of radioactive sodium. *J Obst Gynaec Brit Emp* 57: 566-8, Aug 50
- ²James AE Jr, Strauss HW, Fischer K, et al: Placental imaging with 113m In transferrin and 99m Tc serum albumin. *Obstet Gynecol* 37:602-11, Apr 71
- ³Johnson PM, Chao S, Reilly JA: Placental imaging with 113m In. Results in 100 patients. *Radiology* 103:359-64, May 72
- ⁴Paull JD, Gahres EE, Albert SN, et al: Placenta localization using CR51-tagged erythrocytes. *Obstet Gynecol* 21:33-9, Jan 63
- ⁵Vrettos AS, Megapanos E, Costamis P, et al: Isotopic placentography using CR 51-tagged erythrocytes. *Am J Obstet Gynecol* 93:957-60, 1 Dec 65
- ⁶Weinberg A, Rissi J, McManus R, et al: Localization of the placental site by radioactive isotopes. *Obstet Gynecol* 9:692-5, Jun 57
- ⁷Wheeler PV, Stevens EM, Reeves L: A modified method of radioisotopic placental localization. *Am J Obstet Gynecol* 93:961-4, 1 Dec 65

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A Comparative Study Of In-Hospital Practice In Rhode Island

Clinical Self-Assessment Is The Hall-mark Of The Good Medical Staff And The Good Hospital

By Paul B. Metcalf, Jr., M.D.

In the modern era clinical self-assessment has been the hall-mark of the good medical staff and the good hospital. Beyond the presentation of general statistics such as mortality and infection rates this exercise has traditionally emphasized detailed critiques of *individual* cases. This is and has been a most rewarding educational experience among peers, and has had the very practical advantage of avoiding the time and labor formerly required in the manual retrieval and individual tabulation for review of *groups* of patients. With the introduction of computerized statistical services a host of parameters of study and management can be numerically summarized almost instantaneously for relatively large groups of patients. The increasing interest of consumer, governmental, and other non-professional groups in medical affairs has added new dimensions to the process of evaluation of hospital care and the emphasis has shifted to numbers and norms.

The 14 acute general hospitals in Rhode Island contract with the Commission on Professional and Hospital Activities (CPHA) for such computerized statistical services. The base data include some 200 items and are abstracted separately for each

patient by each hospital's Medical Records Department. At CPHA the abstracts are computerized. Each hospital receives its own summaries at regular intervals, and these are *also forwarded* to the Hospital Association of Rhode Island and to the Rhode Island Department of Health. The principal reports include Professional Activity Study (PAS), Length of Stay (LOS), and Medical Audit Program (MAP).

The Medical Audit Program is examined in this paper in the course of utilizing its data in a comparative study of hospital management of adult medical-surgical patients. MAP should be a matter of interest and importance to every physician for many reasons. It is *our* performance in the treatment of *our* patients which is recorded. Our hospitals receive all of the above reports at a charge of 46 cents per abstract plus an indirect cost in man hours of preparation.* By the direction of the involved hospitals the information down to and including individual patient and physician data is in the hands of the regulatory agency, and recent Rhode Island law (H 2243) permits release of information by hospital name by the Rhode Island Department of Health. (Somewhat similar data are computerized independently by Rhode Island Blue Cross for "utilization review" in claims settlement.) Since the summaries are numerical, their misuse by non-professionals is predictable.

PAUL B. METCALF, JR., M.D., of Pawtucket, Rhode Island, Immediate Past President, Pawtucket Medical Association; PAS (Professional Activity Study) Liaison Physician, Notre Dame Hospital, Central Falls, Rhode Island.

*The total cost, direct and indirect, can be estimated for Rhode Island to exceed \$125,000 annually.

(Continued on Next Page)

More important, however, and in a positive way MAP can be a valuable screening tool for professional committees in assessing strengths and weaknesses and hence in improving patient care.

This paper hopes to assist hospital committees by providing tentative standards for comparison in the "normal" or "average" figures revealed in the experience of three groups of hospitals. These are the four Brown University affiliates, the 10 non-affiliates in Rhode Island, and a number of out-of-state university affiliates of similar case loads. The study covers the fourth quarter of 1970 and was provided by CPHA at the request of the Bio-Medical Statistics Committee of Notre Dame Hospital. The data are limited to adult patients and cover the categories MEDICINE and ADULTS, BY OPERATION. Selected items of information from the M1 and M2 sheets are considered under the various general headings.

COMPARISON OF HOSPITAL POPULATIONS

The basic characteristics of the hospital populations such as age, sex, mode of admission, and length of stay are considered in Table 1. Without sophisticated statistical breakdown, it would appear that the patients in Rhode Island hospitals are older, require more emergency admissions, and in MEDICINE stay longer than the particular out of state sample provided.

ADMISSION CHARACTERISTICS

Certain broad clinical aspects of the patient populations as seen on admission are recorded in Table 2. Potential diabetics, hypertensives and bacterially infected do not vary greatly in percentages, and are comparable in all three groups. University affiliates, both in and out of state, generally have more emergency-type patients, and in-hospital pre-operative work-ups are more prevalent out of state. The latter observation may reflect the Pre-Admission Testing encouraged in Rhode Island.

ADMISSION STUDIES

The recording of blood pressure, white blood count, urinalysis, and weight (Table 3) are so universally recognized as fundamental parameters of good care that it is surprising that any hospital chart would not have these minimum data within the first 24 hours. Indeed, these studies are so routine and so frequently specified in standing orders or staff rules and regulations as to make their performance a matter of administrative responsibility. Although, with the exception of weights, Rhode Island hospitals have fewer omissions in Table 3, corrective action by individual

TABLE 1

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
Discharges, #	3086	3543	4086
	4086	5504	5587
Males, %	51	48	46
	50	47	40
65 yrs. and over, %	23	43	42
	18	29	23
Emergency admissions, %	12	75	35
	6	33	13
Median stay, over 65 yrs, days	9	13	11
	11	10	11
Median stay, all, days	6	10	9
	7	7	7
Average stay, all, days	9.6	13.0	11.3
	11.1	10.9	9.9
Variance from matching stay, days*	—	+0.6	—0.5
	—	—0.1	—0.4

Top rows, MEDICINE

Bottom rows, ADULTS, BY OPERATION

*From a second CPHA study on comparative LOS for these hospital groups in R.I. for 4th quarter 1970.

TABLE 2

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
Urine sugar pos, % *	6	9	6
	3	4	3
WBC, over 10,000, % *	29	35	32
	26	25	25
Diastolic 100 or over, % *	16	18	17
	12	11	12
Temp 100° or over, % *	15	12	12
	15	6	5
Operated, %	26	17	8
	100	100	100
Within 6 hrs, %	34	17	7
	15	22	10
Within 48 hrs, %	60	48	40
	42	73	71

*On admission or pre-operative

Top rows, MEDICINE

Bottom rows, ADULTS, BY OPERATION

hospitals may be warranted after more detailed analysis of their own data.

BASIC HOSPITAL WORK-UP

The quality of the basic hospital work-up (Table 4), including physical examination and other studies, is clearly the responsibility of the attending physician and is dependent upon his initiative, although directed in some degree by local practice and local staff rules and regulations. While the increasing use of private patients for teaching may

TABLE 3

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
No blood pressure, % *	3 4	5 5	3 2
No white blood count, % *	13 9	5 6	3 2
No urinalysis, % *	18 12	9 4	3 2
No weight, %	35 27	44 30	55 40
No minimum lab, %	17 10	7 3	4 2

*On admission or pre-operative

Top rows, MEDICINE

Bottom rows, ADULTS, BY OPERATION

make the failure to perform a rectal or a pelvic examination a shared responsibility, the low percentage of such examinations recorded must be a matter of deep concern for all physicians and most particularly for those in a teaching setting. The failure of the private physician or the resident staff in this regard is in striking contrast to the much higher recorded proportion of electrocardiograms, chest x-rays, serologies, and chemistries which are carried out without their personal effort. The figures interestingly seem to indicate that university affiliated hospitals lay more stress upon funduscopic examinations than pelvic examinations for both medical and surgical patients. Non-affiliates seem more alert to the detection of syphilis but tend to disregard abnormal chemistry reports. Making all allowances for variables, these statistics alone should point the way for improved and more complete hospital records, and suggest that all of the hospitals must have the clear objective of ameliorating these deficiencies where they are found in their own MAP data.

SPECIFIC ASPECTS OF PATIENT MANAGEMENT

Tabulated in Table 5 are aspects of some special forms of patient management. These together with safeguards where indicated are clearly the responsibility of the attending physician. Again, however, many variables are involved; not all clinicians concur in the preferability of packed cells and the wasteful nature attributed to the single unit transfusion. Some blood banks offer whole blood unless packed cells are specifically ordered, and others packed cells unless whole blood is specified. Some physicians routinely order electrocardiograms and chest x-rays pre-operatively on all pa-

TABLE 4

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
Rectal, %	30 33	32 31	24 38
Pelvic, %	18 33	8 15	12 39
Funduscopy, %	38 37	33 15	19 5
Serology, %	59 64	60 53	92 95
Electrocardiogram, %	61 48	75 51	67 36
Chest x-ray, %	74 65	81 62	76 41
Blood sugar, %	60 42	85 74	88 81
Nitrogen derivative, %	77 59	87 78	89 82
Abnormal chemistry, not repeated, %	43 39	44 49	50 56
Consultations, %	33 28	36 29	29 23

Top rows, MEDICINE

Bottom rows, ADULTS, BY OPERATION

tients 40 and over, while others order by individual indications. Staff rules and regulations as well as individualization also affect obtaining blood sugar and nitrogen determinations. Antibiotics may frequently and properly be ordered where there is nothing appropriate to culture, and additionally these statistics do not relate the type or timing of the culture obtained to the purpose for which the antibiotic was ordered. Further, in diuretic use it is periodic weight and blood pressure which are important rather than single readings, and the importance of electrolyte determinations varies with the duration of treatment.

Although the statistics do not weigh these factors, still it would seem that a review of patient care in the various groups of hospitals might well be directed toward closer scrutiny of some of these practices. For example, non-affiliates may need to examine in more detail transfusions, pre-operative electrocardiograms and chest x-rays, and appropriate checks in the use of antibiotics, anticoagulants, and diuretics.

RESULTS

Selected aspects of the outcome of treatment are presented in Table 6. CPHA defines Infection as "Any infection appearing during the course of hospitalization", and Other Complications as "Any condition arising after the patient's admission to the hospital which modifies the course of the pa-

(Continued on Next Page)

TABLE 5

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
Patients, transfused, %	5	7	5
	16	12	9
One unit, % patients	15	16	18
	20	32	37
Packel cells, % units	44	61	45
	16	29	24
Packed cells, % patients	56	69	53
	25	36	27
Operated, over 40, % patients	17	13	7
	59	70	66
No chest x-rays, %	38	15	22
	29	30	44
No electrocardiogram, %	39	21	30
	32	33	49
No blood sugar, %	46	14	12
	48	20	14
No nitrogen derivative, %	15	11	8
	30	16	13
Antibiotics, % patients	21	26	27
	35	36	33
No culture, %	11	16	37
	25	43	50
Diuretics, % patients	12	23	19
	7	6	4
No blood pressure, %	4	2	0
	3	2	1
No weight, %	38	52	51
	31	44	39
No urinalysis, %	7	5	3
	3	2	1
No electrolytes, %	11	12	21
	18	21	32
Anti-coagulants, % patients	15	13	11
	9	4	2
No prothrombin time, %	49	10	38
	56	32	39
No coagulation test, %	12	18	30
	14	21	21
Tranquilizers, % patients	29	47	51
	27	35	45

Top rows, MEDICINE

Bottom rows, ADULT, BY OPERATION

tient's illness or the medical care required". There is a natural reluctance to report infections or complications for many reasons including medico-legal implications. Yet an honest appraisal of the unfortunate occurrence is essential to any attempt at preventing its recurrence. Common experience tells us that as few as 97 infections appearing in over 285,000 days of hospitalization for more than 24,000 patients represents either the millennium of care or gross under-recording and under-reporting. It would appear that this is an area which demands continued and close attention by all hospitals.

While the various case fatality rates cannot properly be compared, it can be remarked that the autopsy rates for Rhode Island non-affiliates seem commendable in the non-teaching setting.

PROGRESSIVE MAGNIFICATION

Within the MAP format a type of "progressive magnification" is possible since most of the data are also presented for smaller groups associated by similarity of disease or operation. Many groupings are too heterogenous to allow meaningful review without further refinement of the material. Some, however, are sufficiently homogenous to lend themselves to fruitful committee study without further amplification.

TABLE 6

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
Infections, %	0	0	0
	1	0	1
Other complications, %	0	4	1
	1	6	4
Deaths, per thousand	44	84	70
	33	33	20
Over 65	95	140	126
	69	68	56
Autopsies, % deaths	55	39	28
	55	49	38

Top rows, MEDICINE

Bottom rows, ADULTS, BY OPERATION

SAMPLE DISEASE GROUP

In this comparative study, CORONARY (Table 7), certain differences between Rhode Island and out of state patients are immediately apparent. A higher proportion of this state's hospital patients have this diagnosis, and more of them are male, elderly, and hypertensive. Their study does not vary remarkably either by state or setting, except that in Rhode Island abnormalities of cholesterol and lipids are more sought after. It is tempting to suggest that the lower use of parenteral fluids and oxygen by the non-affiliates may reflect a relative scarcity of intensive care and coronary care unit (ICU-CCU) beds, and perhaps this is a factor which should be further studied in light of the apparent major differences in overall mortality. (The ICU-CCU parameter of treatment is reported in MAP to each hospital; but in the present study the numbers for Rhode Island annoyingly exceeded the space allotted, and it can only be stated that more than 99 patients in each hospital group were so handled. Non-Rhode Island hospitals placed 85 per cent of their coronary patients in special treat-

TABLE 7

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
CORONARY			
Discharges, #	67	297	288
Males, %	58	64	63
% medical discharges	2.2	8.4	7.1
65 years and over, %	42	52	50
Average stay, days	19.7	22.7	20.0
Variance from matching stays, days*	—	+0.4	—1.7
Urine sugar positive, % **	10	9	6
Urine albumin positive, % **	19	16	11
Diastolic 100 plus, % **	18	26	24
Electrocardiograms, %	98	97	96
Repeat electrocardiogram, %	86	77	88
Chest x-ray, %	82	89	76
Blood sugar, %	81	86	85
Nitrogen derivative, %	88	90	84
Electrolytes, pH, %	91	79	64
Transaminase, LDH, %	95	93	89
Cholesterol, lipids, %	22	51	59
Abnormal chemistry, not repeated, %	27	28	36
Parenteral fluids, %	81	73	45
Oxygen, %	73	62	39
Hypotensives, %	9	2	4
Diuretics, %	34	38	32
Vasopressors, %	2	2	5
Vasodilators, %	4	7	9
Cardiac regulators, %	63	50	47
Anticoagulants, %	51	42	52
Tranquilizers, %	75	68	68
ICU-CCU, % ***	85	+34	+35
Infection, %	0	0	0
Other complication, %	0	6	1
Deaths per thousand	240	175	260

*From a second CPHA study on comparative LOS in Rhode Island for the 4th quarter of 1970

**On admission

***The M2 print-out allows space for only two digits, i.e. the number of Rhode Island coronary patients treated in ICU-CCU was one hundred or more for both groups of hospitals

ment unit beds.) Other differences in management are of doubtful significance.

The parameters here selected probably vary from those any given audit committee might select, and many factors often considered in clinical papers are not available. But such a numerical summary may be scanned rapidly and indicate whether the state of management of such patients in a particular hospital needs more intensive and detailed review.

SAMPLE OPERATION GROUP

CHOLECYSTECTOMY is reviewed comparatively in Table 8. It is to be noted that the MAP summary sheet does not differentiate acute cholecystitis from chronic, nor is the presence or absence of choledochostomy noted. Rhode Island patients seem to be older with a somewhat higher proportion of males. The operation is more common in this state, and in the non-affiliates it is relatively more frequent than in the teaching institutions. That university hospitals generally see more acute cases may be suggested by fever on admission, timing of operation, and transfusions.

The low percentage of patients receiving "digestive x-rays" (which includes gastrointestinal (GI) and gall bladder (GB) series) is probably explained by a CPHA rule excluding studies done more than 24 hours before admission. (It is known that this rule is observed with great variability by the hospitals in this state, not only with respect to x-rays but all other forms of Pre-Admission Testing.) The various relationships between Bacteriology, Antibiotics, and Infections is of interest. For both groups of university hospitals the number of cultures exceeds the number of patients receiving antibiotics. This is suggestive of a study routine of bile culture at operation. It also casts doubt on the validity of the general category Antibiotics without culture, since this is simply a statement of the difference numerically between the total of patients receiving *any* antibiotic and the total of those having *any* culture, there being no necessary direct relationship between the two. The consistent percentage of patients receiving antibiotic and the published incidence of wound infections attending cholecystectomy, when compared to the uniform absence recorded here, underscores again the faulty reporting of this item generally.

DISCUSSION

As physicians we have all been dealing with numbers in one way or another since our early years in medical school. We have been taught to ask a number of questions before accepting results at face value. It would be well to utilize such an approach to the present data.

The numbers in this study represent averages or norms of experience with relatively large series of patients. In a general way the three hospital groupings and the service pairings are comparable. The numbers are derived by computer from individual discharge abstracts manually prepared and

(Continued on Next Page)

TABLE 8

Factor	Univ. Non R.I.	Univ. R.I.	Non- affil. R.I.
CHOLECYSTECTOMY			
Oischarges, #	102	209	285
Males, %	22	29	27
% adult operations	2.5	3.9	5.1
65 years and over, %	13	29	24
Average stay, days	12.7	13.5	11.6
Variance from matching stays, days*	—	—0.4	—1.9
Urine sugar positive, % **	1	3	4
White blood count over 10,000 % **	27	26	23
Diastolic 100 plus, % **	10	5	15
Temperature 100° plus, % **	14	1	6
Electrocardiogram, %	58	67	48
Chest x-ray, %	67	73	53
Digestive x-ray, %	78	51	46
Blood sugar, %	42	82	91
Nitrogen derivative, %	64	83	91
Electrolytes, pH, %	63	65	46
Liver Function, %	70	71	60
Transaminase, LDH, %	50	50	50
Protein, electrophoresis, %	28	29	44
Cholesterol, lipids, %	14	25	39
Bacteriology, %	83	52	32
Operated within 6 hours, %	3	12	1
Operated within 48 hours, %	50	61	65
Patients transfused, %	19	7	4
Antibiotics, %	44	43	41
Infections, %	0	0	0
Other complications, %	4	8	6
Deaths per thousand	39	19	32

*From a second CPHA study on comparative LOS in Rhode Island for the 4th quarter of 1970

**Pre-operatively

transposed with attendant human error as suggested, and the abstracts certainly can be no better than the records from which they are prepared. Additional variables are variations in hospital custom, rules, or both, and adherence or lack of it to CPHA definitions and rules. In some instances the categories of management selected to show presumably desirable clinical practice may be open to valid questioning.

If one accepts the limitations above, then do the data represent a true difference in practice overall between the groups and pairings? Applying the chi squared method by ranking to samplings

of categories, it is concluded that statistically the overall differences are not significant. Using experience and goals of practice one does find areas which seem to indicate items of importance.

If the differences noted above have limited significance within the context of the three hospital groups, then do differences between them and the experience of a single hospital carry notable weight in a process of self-analysis? The answer probably is that they do if they are knowledgeably interpreted and suitably followed up. The implication here is that of and by themselves the numbers and the variances are unlikely to have absolute statistical significance. If, however, they are used as guides, they may on further more detailed examination lead to the identification of weak or strong points of hospital practice, and thus to correction of deficiencies, or wider employment of successful methodology.

Changes from one time period to another may indicate a trend or a response to educational efforts. However it must be pointed out that the small hospital will have to use data consolidated over several periods to identify such trends with any useful certainty. Interpretation of material for a particular hospital requires a suitable professional and statistical background, and most important an intimate knowledge of the institution's individual problems and practices. Interpretation is not an armchair quarterback's job, be he administrator, trustee, reporter, politician, or bureaucrat.

It may be fairly asked whether extensive use of such normative figures is not playing a "numbers game" and, more important, whether it is not exerting a pressure on the quality of medical care which inexorably leads to an ideal of averageness. If the committees or individuals using the data have only the aim of "making the numbers come out right", then it seems logical that mediocrity would be a likely outcome. If, on the other hand, the data are used as tools to attain better clinical review and as guides to identify weak or strong points through more detailed analysis, then it seems reasonable that better care would result.

CONCLUSIONS

1. A selected sampling of data of non-affiliated and Brown-affiliated hospitals in the State of Rhode Island has been brought together for comparative purposes.

2. Measures of practice in the State of Rhode Island in both affiliated and non-affiliated hospitals (Concluded on Page 250)

Scleredema Vs. Scleroderma

Differentiation Of Often Confused Disorders Is Explained

By A. Paul Kelly, M.D., and Bencel L. Schiff, M.D.

Recently we were asked to present a case of scleroderma at Medical Grand Rounds in two different Brown University Affiliated Hospitals. Although the internist, armed with the "compatible with scleroderma" report of the pathologist, was sure of his diagnosis in each case, we felt that both cases were classical examples of scleredema. A diagnostic guide is herewith described.

CASE REPORTS

Case One. A 36 year old obese white male with an 11 year history of diabetes (insulin therapy for the past four years) developed hardening of the skin on the posterior neck and upper back three years ago. Within eight months this hardening had spread to his lateral neck, chest, upper arms, shoulders, and midback. His skin has remained stable with the above degree of involvement since then, and the areas of involvement are well demarcated from the clinically normal skin. He also had acanthosis nigricans of the neck and axillary areas (Fig. 1).

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Case Two. A 26 year old black male noticed swelling and hardening of the skin of his upper back, chest, and neck approximately two weeks after a severe upper respiratory tract infection (URI). The swelling and hardening began to recede rapidly after two months.

We thought Case One represented scleredema diuturnum and Case Two classical scleredema adultorum.

Since dermatologists are often asked to consult on or present similar cases, we think the following three outlines will help serve to separate scleroderma in a clear and concise manner.

(Continued on Next Page)



Fig. 1

Showing the hardening of the skin on the posterior neck and upper back typical of scleredema plus papillomatous lesions of acanthosis nigricans.

SCLEREDEMA

A. Two classes

1. Scleredema adultorum of Buschke
 - a. any age
 - b. 2-6 weeks after URI
 - c. spontaneous resolution 6-24 months
2. Scleredema diutinum
 - a. not associated with URI
 - b. often associated with diabetes
 - c. duration = years to life time
 - d. onset 3rd-4th decade

B. Clinical Manifestations

1. Non-pitting induration
2. Symmetrical
3. Sharply or poorly demarcated
4. No atrophy, pigmentary changes, hair loss, loss of sweating, loss of sensation, or evidence of inflammation
5. May have dysphagia (secondary to tongue and pharynx involvement), pleural effusions, pericardial effusions, hydrarthrosis, EKG abnormalities, parotid gland enlargement, osteosclerosis and ocular involvement.

CLINICAL MANIFESTATIONS

	Scleredema	Scleroderma
Dysphagia	often	often (secondary to esophageal motility; lower 1/3)
Tongue	involved 40-70%	never
Nipple	yes if surrounding skin involved	no if surrounding skin involved
Atrophy	no	often
Hands and feet	unusual	often
Inflammation	no	often
Pigmentary abn.	no	often
Raynauds	no	often
Obesity	often	no
Sex	increase, females	increase, females

HISTOPATHOLOGY AND LABORATORY

	Scleredema	Scleroderma
epidermis	normal	may have atrophy and loss of rete ridges
interfascicular spaces	widened	decreased
subcutaneous fat	normal or replaced by connective tissue	atrophied or replaced by abnormal connective tissue
sweat glands	normal (may appear bound down)	atrophic, decreased in number, bound down
inflammatory infiltrate	+ —	+++ in early morphea
pilosebaceous apparatus	normal	usually atrophic or absent
collagen bundles	thickened	thickened
elastic tissue	normal	broken up or destroyed
muscle bundles	normal	may show degeneration
glycosaminoglycans	increased hyaluronic acid, normal dermatan sulfate	normal hyaluronic acid, marked increased dermatan sulfate
sedimentation rate	normal	60-80% show increase
ANA	normal	90% +
Electronmicroscopy	dermis and subcutaneous = fibers clumped by interfibrillary material, thinner, and show splitting.	elastic fiber degeneration, thickened basal lamina at dermal epidermal junction, 3 types of collagen fibrils: 1) uniform, 700 Ang, round; 2) clusters of thin and thick fibrils 200A-900A; 3) bundles of 1000A fibrils with polygonal cut surface, acid glycosaminoglycans between collagen fibrils and elastic fibers

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Editorials

ALL GOOD THINGS MUST END

With the coming of the summer solstice the eternal rhythms of time will bring a shortening of the daylight hours but, more pertinent to our little world of Francis Street, a bright light will begin its eclipse. John Edward Farrell, A.B., Sc.D., Executive Secretary of the Rhode Island Medical Society and Managing Editor of this Journal, will retire. His departure will leave a void which time will heal but reluctantly.

John came to the Providence Medical Association in 1938 and five years later was engaged as Executive Secretary of the Rhode Island Medical Society. He has been the only Executive Secretary of either association, serving for more than a fifth of the whole history of the venerable State Society and for more than a third of that of the younger city Association.

He became Managing Editor of this Journal in 1943. If we date our beginnings from those of the old Transactions of the Rhode Island Medical Society (1859), he has served for almost a fourth of its history, or if from its modern establishment in 1917, more than a half of its total life. During these 30 years he has collaborated with four Editors of wildly different personalities — Albert H. Miller, Peter Pineo Chase, John E. Donley, and the present incumbent. He assumed the financial management of the Journal in 1945 from the late Grace E. Dickerman, long-time Librarian, and her doughty assistant and successor and present incumbent, Helen Moffitt DeJong. (In those days that's all there were.)

These are the bare bone facts. They convey but dimly the contributions that John has made in a lifetime of service to the Medical Society and to this Journal, serving many presidents, many coun-

cils, and many generations of the House of Delegates. He has become Mr. Medical Society. He has gained a solid reputation in both national organized medicine and on the local scene. He commands respect in AMA leadership circles and among his fellow executive directors as a pioneer, thinker, innovator, and good fellow.

Locally and nationally he is recognized for his encyclopedic knowledge of the highways and byways of organized medicine, his keen judgment of men and events, his lucid and vigorous prose, and his subtle and unerring political instincts. Over the years he has contributed many timely and succinctly written editorials to these pages. He has worked conscientiously, precisely, and efficiently with dozens of committees and officers of the Society, who have through many years sought, heavily relied upon, and valued as indispensable his insight and wisdom.

Our efforts to improve and perfect this Journal have always received John's sympathetic and understanding support. What modicum of success we have had, we owe in no small measure to his wise and discriminating counsel.

We look forward for many years to seeing his name on our masthead as Managing Editor Emeritus — a small but well deserved recognition of his many years of service to medical journalism.

In behalf of the Editorial Board of this Journal, and of the generations of officers and members of the Rhode Island Medical Society with whom he has worked, we wish John well and many years of health and happiness. We shall miss him.

Hail — but not farewell!

SEEBERT J. GOLDOWSKY, M.D.

Editor-in-Chief



JOHN E. FARRELL, A.B., Sc.D.

John E. Farrell, executive secretary of the Society since July, 1943, and of the Providence Medical Association since June, 1938, has announced to the Council his retirement from the position effective July 1. The Council reported the decision of Mr. Farrell at the March meeting of the House of Delegates which then authorized the Council to name a successor.

Mr. Farrell became the first non-physician executive secretary of any medical society in the New England area when he left his post as graduate manager of athletics at Providence College in 1938 to organize and manage the activities of the Providence Medical Association. His work in the ensuing four years attracted wide attention, and he

(Continued on Next Page)

was offered opportunities to join national organizations, but he preferred to remain in Rhode Island. In 1943 he assumed the executive role for the state medical society in addition to his assignment for the Providence group.

Under his management the Rhode Island Medical Society has been continuously in the forefront in organized medical activities. He was a pioneer in the development of the Rhode Island Plan which preceded the formation of the R. I. Medical Society Physicians Service in 1949, of which he has been the executive secretary for its Corporation and Board of Directors ever since.

An experienced journalist, Mr. Farrell took over the management of the RHODE ISLAND MEDICAL JOURNAL in 1943 and soon developed it into a leader among state medical publications. He contributed heavily to the editorial content of the Journal for many years, and in addition published articles in *Medical Economics* and the *Journal* of the *American Medical Association* on socio-economic subjects.

A founder of the American Association of Medical Society Executives, of which he was subsequently secretary-treasurer, and then President, Farrell has played a major role in health organizations regionally and nationally. He was a member, and later chairman of the Medical Executives Committee advisory to the American Medical Association on public relations, and he was one of three non-physicians on the AMA's commission to study and report on grievance committees of state and county medical associations throughout the nation.

He was for three years secretary-treasurer of the national Conference of Presidents and Other Officers of State Medical Associations, and he aided in arranging the notable conference which had President Nixon, then Senator Nixon, and John Cardinal Wright, then Bishop Wright of Worcester, as speakers before an AMA assemblage in Atlantic City.

He is a Fellow of the American Public Health Association, and he was active in its Health Division, serving one year as chairman of the conference at a national convention of that group. He was secretary-treasurer, and later the first Rhode

Islander ever to be president of the New England Health Education Association, the nation's oldest organization of its kind. He also wrote the history of that Association.

In 1945 he founded and organized the Council of the New England State Medical Societies, and he served as its secretary-treasurer for six years.

His work locally has affected many Rhode Island health and welfare organizations. He was at one time director of public relations for the Rhode Island division of the American Cancer Society; he is a former vice president of the R. I. Conference of Social Work; he was executive secretary of the health division of the Civilian War Services; a director for many years, and chairman of the committee on health and safety of Narragansett Council, Boy Scouts of America; and for several years secretary of the health division of the R. I. Council of Community Services. He was an incorporator, and for many years a board member of the Rhode Island Society of Crippled Children.

A former president of the Providence College Alumni Association, Mr. Farrell edited and published the first alumni publication in 1940. He was awarded an honorary degree of science by the College in 1947 for his outstanding work in the community, and in 1970 he was one of the first to be elected to the College's athletic Hall of Fame.

At a special reception on May 20, 1973 Mr. Farrell received the following awards:

On behalf of the Society a sports cartoon portrait by Mr. Frank Lanning of the PROVIDENCE JOURNAL presented by A. A. Savastano, M.D., Vice President; from the Board of Directors of the R. I. Medical Society Physicians Service a certificate of appreciation from Mr. Arthur Hanley, Executive Director; on behalf of Thomistic Guild of Physicians an honorary membership in that organization from Rev. John Kenny, O.P.; from the Providence Medical Association hurricane lamps presented by Peter L. Mathieu, Jr., M.D., Vice President of that organization; and on behalf of the Society a silver Revere Bowl, the annual gift to the outgoing president, presented by Edmund T. Hackman, M.D., President of the Society. On behalf of the Society Judge Florence K. Murray presented jewelry to Mrs. Farrell.

NURSING'S CONTRIBUTION AND COMMITMENT

Suddenly, it seems, nurses through their organizations — The National League for Nursing, The American Nurses Association and The American Association of Colleges of Nurses — are making startlingly clear some important facts which we as physicians, patients, and people have known at least subconsciously all along, but have not sufficiently acknowledged.”*

These facts concern the importance of the nurse in the planning, development, and delivery of comprehensive patient care. This has always meant the nurse at the bedside, at the operating table, in the clinic or office, and in public health. Of more importance, however, is the status of the nurse in the coordination of health services. This signifies the involvement of the nurse in the long-term planning and delivery of health care, with the nurse serving in roles of administrator, technician, psychologist, and monitor of the quality of this care — from the grass roots to all other relevant pursuits and from the cradle to the grave.

Because of the nurse's unique closeness to the acutely and chronically ill patient, to the family of the ill patient, and to the physician, he or she is immediately qualified to lead the way with the physician and with other health professionals at all levels of society and of government.

The fact that the nurse is so well qualified has been ignored in large measure up to now. Probably this is because of the scarcity of career female nurses and the relative scarcity of male nurses as

compared with the great multitude of people in public service associated with health care delivery.

It should not surprise us to learn that our nursing sisters and brothers are becoming deeply involved as nurse-practitioners, and as monitors of clinic-home, primary, and chronic care at the family, state, and national level. Also many are serving as nursing consultants to the patient and the physician and in the carrying out of medical procedures such as the taking of Pap smears and electrocardiograms and performing of partial physical examinations for the insurance industry. Certainly, the skilled operating room and bedside nurses should be welcomed into the mainstream of people care — these trained individuals who have so much to offer in doing and in planning.

The Rhode Island Joint Committee of Nurses and Physicians, comprising members of the Rhode Island State Nurses Association and the Rhode Island Medical Society, with Mrs. Rita Adair, R.N., serving as Chairman, has been working in 1973 to establish some of the basic functions that a nurse should be able to perform.

This study has with each meeting grown increasingly complex, since it is becoming clear that the ability of the dedicated nurse is unbounded, depending upon her training and background and limited only by the advice and counsel of a dedicated physician.

The role of the nurse, long overlooked, is now assuming the importance it deserves. This importance will increase as more and more thoughtful, interested persons become more and more deeply involved.

*Nursing's Contribution and Commitment. NLN-ANA-AACN Joint Statement, 1973.

Guest Editorial

IMPACT OF SPECIALIZATION*

Specialization of manpower is both a boon to and the bane of the teaching hospital. If a new, highly specialized physician is to be added to the staff, he usually will require the addition of specialized technical staff and equipment. He will want to reproduce himself, which means adding fellows or residents to the payroll to obtain training in the specialty. He will want to offer elective

opportunities for medical students, so that provision must be made for laboratory or classroom space. Research in his field is essential; therefore, laboratory space, equipment, technical help, and research fellows are needed. In addition, the new specialist will want colleagues, so that together they may advance the state of the art. Each of these associates will, in turn, enhance demands upon the system.

From the foregoing, it is readily apparent that

(Continued on next page)

*Quoted from Lee SS: Teaching Hospitals: Alone or Together? *Bull NY Acad Med* 48:1467-71, 1972 with permission of the author and publication.

the marginal cost of adding a single specialty to a single hospital may involve a substantial investment of capital and a continuing commitment of large sums of money to the operating budget.

In appointing the specialist, one assumes that his specialized skills are of potential benefit to a fraction of the patients to be served in a given hospital. Is there enough demand in the single institution to fill the available time, or is demand in excess of the single specialized physician? Is demand perhaps beyond the capacity of one physician, but too little for two? Are the supporting technical services required around the clock, seven days a week, or only for a single shift on a five-day basis? How is coverage to be provided for vacations, professional travel time, holiday time, illness? How much capital investment in physical facilities or technical equipment is required?

When one considers the amount of investment and the size of the operating cost for a single new

specialty, fitting the specialty to the expected needs of the patients of a hospital or hospitals in order to spread the cost becomes terribly important. Unfortunately, the capacity to measure the need is woefully deficient.

How many patients, outpatients, home care patients, or satellite clinic patients will require this service over time? How many people should be trained in this specialty? Is this specialty itself at an important phase of its development? Is its future, as well as its present application, worth the investment? How much should one hospital or one medical school commit to this development as compared with alternatives for investment? How does one guide such a development through the maze of hospital and faculty committees to yield a thoughtful appraisal? How is development to be financed? How much of the cost should be borne by the patient and his financing sources, by the educational budget, or by society in general?



DERMAQUIZ

Conducted by Francesco Ronchese, M.D.



Hard, indolent, nodules, on the nape of the neck, of many years duration.

Answer on Page 243

Integument!

Our skin—the human integument covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

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Each gram contains: Aerosporin[®] brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ⅓ oz. (approx.) foil packets.

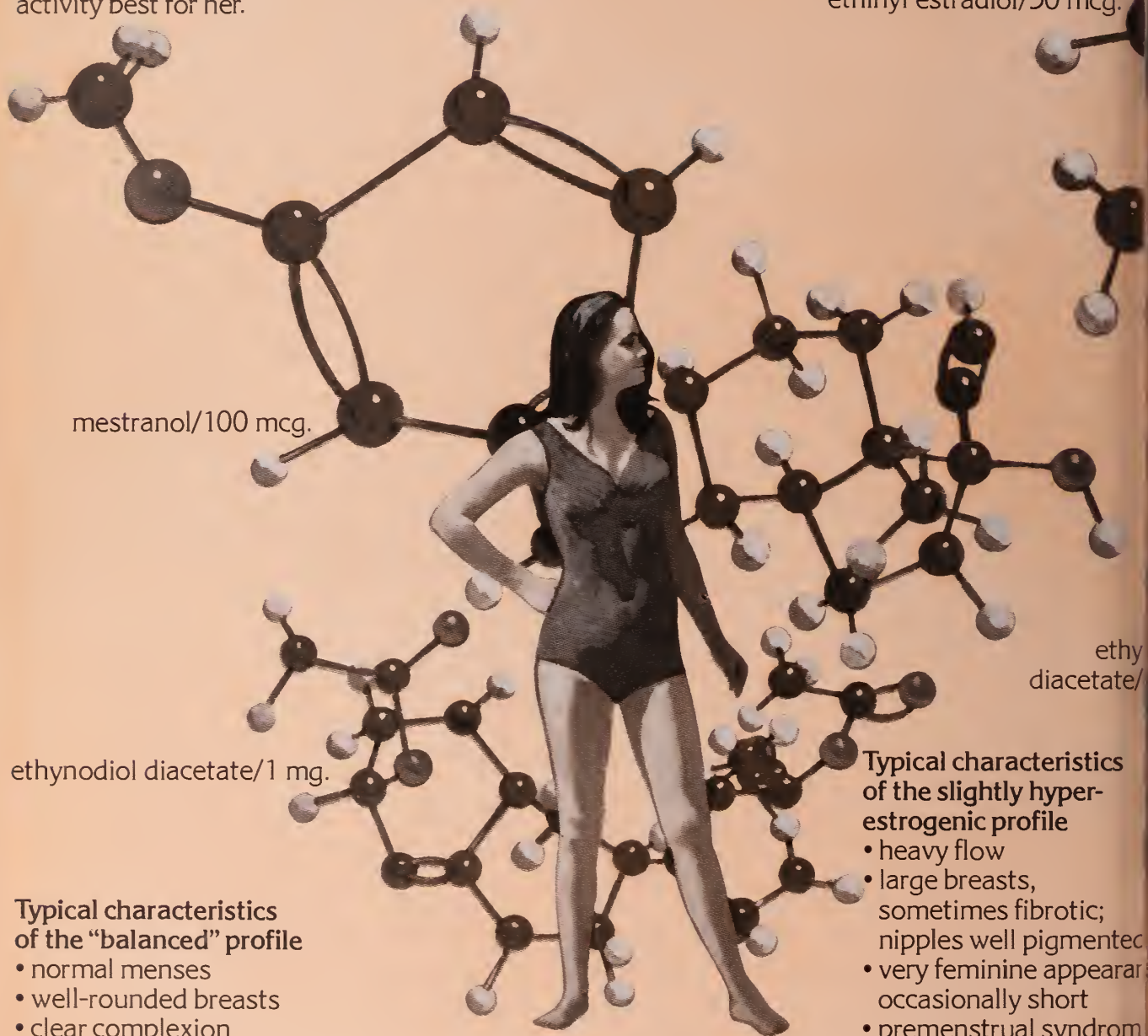


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ethynodiol diacetate/1 mg.

ethynodiol diacetate/1 mg.

Typical characteristics of the "balanced" profile

- normal menses
- well-rounded breasts
- clear complexion
- normal figure with normal secondary sex characteristics
- normal cytohormonal pattern

This "center spectrum" pill has had excellent user acceptance for over seven years.

Typical characteristics of the slightly hyper-estrogenic profile

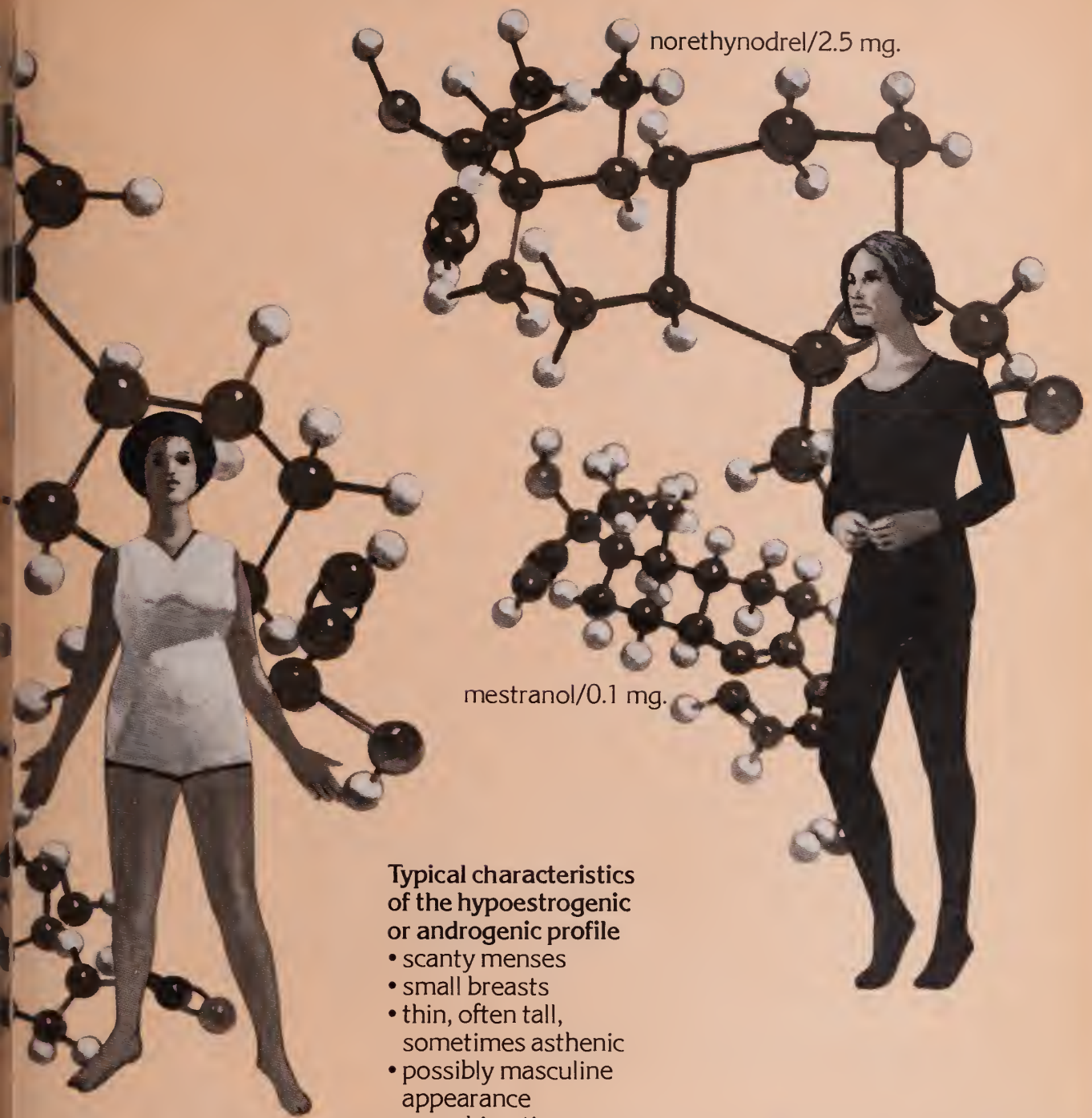
- heavy flow
- large breasts, sometimes fibrotic; nipples well pigmented
- very feminine appearance; occasionally short
- premenstrual syndrome; fluid retention
- tendency to uterine fibroids
- high pyknotic index

This formulation, which has less estrogenic activity and a moderate progestogen dominance, may be a good beginning.

Ovulen®

Available in 20-, 21- and 28-pill schedules
Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg.
Each pink tablet in Ovulen-28® is a placebo containing no active ingredients.

for the majority of women...
when centrally balanced
activity is preferred



**Typical characteristics
of the hypoestrogenic
or androgenic profile**

- scanty menses
- small breasts
- thin, often tall,
sometimes asthenic
- possibly masculine
appearance
- acne, hirsutism
- low sexual motivation
- thin vaginal lining,
tendency to vaginitis
and dyspareunia

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When low estrogenic activity
and moderate progestogen
activity are preferred

This pill has a relatively
weak and unique* progestogen
with inherent estrogenicity.
Clinically, just as in animal
studies, it appears not to
possess antiestrogenic and
androgenic activity.

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when estrogen dominance
and no androgenic activity
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the estrogens. It has the weakest proges-
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combination pill.

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Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain¹⁻³ leading to this conclusion, and one⁴ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible

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influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient or stitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factor VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein-bound iodine, and decrease in T³ uptake values; metyrapone test and pregnandiol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:26-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-195 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relationship Between Use of Oral Contraceptives and Thromboembolic Disease. Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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with estrogen-dominant/
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norethynodrel 2.5 mg./mestranol 0.1 mg.

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The **Special Note**, **Contraindications**, **Warnings**, **Precautions** and **Adverse Reactions** listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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brand of norethynodrel with mestranol

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Editor's Mailbox

PSRO IN PERSPECTIVE

To the Editor:

The stated objective of PSRO (Professional Standard Review Organization) is to control and limit unnecessary hospitalizations. The "Bennett Amendment" provided for its implementation in HR 1, which was renamed PL 92-603 and signed into law on October 30, 1972. This Social Security Amendment of 1972 has been adopted by the AMA and will go into effect as soon as *Regulations* are issued by the Department of HEW, but "not later than January 1, 1974".

PSRO provides for the determination of norms of diagnosis and treatment of elective cases, and the establishment of sanctions against those physicians who are found not to comply with its requirements. In order to accomplish both these aims, the "confidentiality of *Privileged Communication*" between doctor and patient is destroyed in both the hospital and physician's office.

Several sections of the law are worthy of special review:

Section 1155: "Physicians assigned responsibility for review of hospital care should not be responsible for . . . review . . . in any hospital

in which such physicians have active staff privileges", but they can only "participate in review of care".

Section 1156: "The National Professional Standards Review Council shall provide . . . to each PSRO . . . appropriate materials indicating the original norms to be utilized" concerning health care services for various illnesses. Each PSRO shall apply professionally developed norms of care, diagnosis and treatment based upon typical patterns of practice in its regions. Chiropractors services are covered (Section 275). If such norms differ from what is accepted by HEW, modifications may be considered "in the event that a proper consultation and discussion indicate reasonable basis for usage of other norms". This, obviously, means prior approval by the Secretary of HEW.

In the final analysis PSRO's are controlled by the HEW bureaucracy.

The composition of the PSRO is limited to "practicing physicians". This would obviously include physicians from Labor Union-controlled or-

(Concluded on Page 249)



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calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

HOUSE OF DELEGATES REPORT

(Continued From Page 219)

Companies on the subject of malpractice in the light of a recent R. I. Supreme Court opinion. The subject is under review by legal counsels and a memorandum will be prepared later for the guidance of the membership.

20. *Referral of Medicare Complaint to Council*

The Council received and accepted a complaint from the Medicare carrier relating to charges by a physician in excess of the assignment fee, and it delegated the investigation of the problem to a sub-committee of the Council.

21. *Delegate to the U. S. Pharmacopeial Convention*

The President was authorized to name a delegate to the U. S. Pharmacopeial Convention

22. *NBC's Television Program "What Price Health?"*

The President protested the carrying of the biased program on health delivery care and costs by WJAR in Providence, the local NBC affiliate. The Society requested that in the future equal time be given locally for health authorities to answer factually when allegations are made regarding medical care.

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23. *Drug Abuse Information for Membership*

Approval was given for the publication and distribution of a booklet for the membership listing facilities and agencies involved in the treatment of drug addiction. The booklet has been drafted by the Society's Committee on Drug Abuse.

24. *Fiske Essay Fund*

In spite of an offer of a \$1,000 prize in 1972 for a Fiske Essay, no manuscripts were submitted. In recent years there has been little or no interest in this type of competition. Therefore the Council has requested that legal counsel review the Fiske will to determine if the funds may be used for another worthy purpose.

25. *Membership Status of Fellows*

The Council voted that physicians designated as Fellows on hospital training staffs be considered within the Intern-Resident category, and therefore be exempt from the payment of annual dues during their term of training.

26. *Committee on Nominations*

The President was authorized to name a committee on nominations of officers and elected committees for 1973-74.

27. *Professional Services Review Organization*

The Council approved in principle the incorporation of a Rhode Island Professional Services Review Organization, Inc., as a non-business corporation, and it authorized the President to name five members of the Society, and to invite the state osteopathic society to name one of its members, to be the initial incorporators.

Subsequently bylaws will be drafted when guidelines are issued by the federal HEW department, and members of both the Rhode Island Medical Society and the Osteopathic Society of Rhode Island will be invited to be members of PSRO, Inc.

28. *Annual Report of the Treasurer*

The annual report of the Treasurer was reviewed and approved subject to professional audit.

29. *Letters to Membership from R.I. Ophthalmological Society*

The Rhode Island Ophthalmological Society expressed a desire to inform all the physicians of Rhode Island of the status of the issue involving the use of certain drugs by optometrists. The Council expressed no objection to such a mailing.

30. *Benevolence Fund Annual Report*

The annual report from the Trustees of the Benevolence Fund was received and placed on file.

REPORT OF THE TREASURER

John P. Grady, M.D.

SUMMARY FINANCIAL STATEMENT, 1972

Summary Financial Statement . . . 1972

Cash balance, Industrial National Bank, Jan. 1972	\$ 4,846.72
Receipts, 1972	138,340.50
Total	\$143,187.22
Expenses, 1972	\$131,394.58
Cash on hand, Industrial National Bank, Jan. 1973	11,792.64
General operating account	\$10,037.13
Library Resource Grant	112.16
Medical All Purpose Fund	1,500.00
Emergency Medical Care Fund	143.35
* * *	
Invested assets (Market Value) (11-30-72)	\$146,845.37
Total	158,638.01

John P. Grady, M.D.,
Treasurer

RECOMMENDATION FROM THE COUNCIL

Stephen J. Hoyer, M.D., Secretary

Amendments to Proposed Bylaws

Two changes are recommended in the bylaw provisions to be submitted to the membership for approval or otherwise at the Annual Meeting on March 14, 1973, as follows:

ARTICLE VII. THE COUNCIL (Amendments in capital letters)

Section 2. *Composition.* The Council shall consist of the Councillors elected by the component societies, the five most recent living past Presidents of the Society, IF ACTIVE MEMBERS, the President, the President-Elect, the Vice President, the Secretary, and the Treasurer, AND FIVE COMMISSIONERS ELECTED BY THE HOUSE OF DELEGATES, UPON NOMINATION OF THE PRESIDENT, WHO SHALL SERVE AS NON-VOTING MEMBERS.

* * *

In a revision relating to standing committees, boards of trustees, and commissioners, the wording adopted in September by the House stated that the Commissioners shall be active members to hold no other office in the Society. The Council now recommends that this phrase be amended to read: "A Commissioner who shall be an active member of the Society and who IS NOT AN OFFICER OF THE SOCIETY and" (Officers are specifically designated in the bylaws).

RESOLUTIONS

1. RESOLUTION ON FREE STANDING AMBULATORY OPERATING FACILITIES

Whereas the Council on Medical Service of the

American Medical Association, in October of 1971, did propose standards for free standing ambulatory operating facilities, setting forth regulations as follows:

1. The facility must be established, equipped, and operated primarily for the purpose of performing surgical procedures.

2. The facility shall not provide beds or other accommodations for the patients to stay overnight.

3. The facility complies with applicable licensing requirements which would be further designated by the state health department.

4. The facility shall have an identifiable governing authority, one member of which must be a surgeon, and another a lay member of the community.

5. The facility has a chief executive designated by the governing authority to whom responsibility for the operation of the facility is designated.

6. Appropriate committees shall be organized to provide and maintain high standards of care, and to determine the appropriate methods for evaluation.

7. The facility permits procedures to be performed only by licensed practitioners who are legally authorized to perform such procedures, and are privileged to perform such procedures in at least one accredited hospital.

8. The facility requires that in all cases other than those requiring only local infiltration anesthetics a qualified anesthesiologist supervises the administration of anesthetics and be present at the facility during all periods when a patient is present.

9. The facility shall provide for or is equipped
(Continued on Next Page)

DERMAQUIZ ANSWER

(See Page 240)

Keloidal Acne.

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to perform diagnostic x-ray and laboratory determinations required in connection with any procedure to be performed.

10. The facility provides full-time services or registered professional nurses for patient care in the operating and post-anesthesia recovery room.

11. The facility shall have available the necessary equipment and trained personnel to handle foreseeable emergencies.

12. Provisions must be maintained for transfer of a patient to a hospital who might require hospitalization.

13. The authority should take appropriate precautions to insure the safety of patients.

14. The facility maintains adequate medical records for each patient which would include name, address, age, surgical procedure performed, medications given, vital signs before, during, and after the procedure, a hemoglobin and urinalysis if general anesthesia is used, a medical release signed by the patient, and the surgeon's operative report.

Therefore,

Be It Resolved that the House of Delegates of the Rhode Island Medical Society, assembled in meeting on January 24, 1973, endorses the concept of free standing ambulatory operating facilities under such regulations as proposed by the Council on Medical Service of the American Medical Association as being a medical service benefit to the people of Rhode Island, and further

Be It Resolved that the House of Delegates request the Department of Health of the State of Rhode Island adopt regulations such as set forth in this resolution for such ambulatory facilities in establishing applicable licensure requirements.

2. CHARLES P. WILLIAMSON

Whereas Charles P. Williamson served the Rhode Island Medical Society and the Providence Medical Association for more than two decades as legal counsel, and

Whereas his professional work was enhanced by a deep personal interest in the problems of physicians and their professional societies, an interest that was manifest by his willingness to be available at all times to assist the Officers and members of these organizations, and to provide clear and sound views on difficult issues confronting Medicine,

Therefore, Be It Resolved that the House of Delegates of the Rhode Island Medical Society, assembled in meeting on January 24, 1973, record the loss of an outstanding legal advisor and a true friend in Charles P. Williamson.

RESOLUTION

Whereas many modern scientific theories have been advanced on the mechanisms of action of acupuncture, with the ancient Chinese rationale most widely accepted, and

Whereas investigations are currently underway in many medical centers in the United States, and by the National Institutes of Health, whereby objective data will be obtained by scientific research and evaluation of acupuncture, and

Whereas all present evidence indicates that acupuncture itself is a procedure in which the skin is penetrated and as such must qualify as a medical and surgical procedure,

Therefore, Be It Resolved that the House of Delegates of the Rhode Island Medical Society, assembled in meeting on January 24, 1973, declares that acupuncture should not be performed in Rhode Island until it is established by scientific research that it is an ethical and proper treatment, and then it should be performed only by physicians licensed to practice medicine and surgery in this State; and further, the House urges that the Rhode Island Department of Health give favorable consideration to this opinion in the interest of the health and safety of the citizens of the State.

COMMITTEE REPORTS ALCOHOLISM COMMITTEE

The Alcoholism Committee has met several times to discuss the present operation of the Model Alcoholism Act (H 2040 Sub. A) which was adopted at the 1972 session of the Rhode Island General Assembly. The committee has expressed concern that the implementation of the statute has been carried out too rapidly so that treatment of the alcoholic in suitable facilities to replace jailing was not available; the quick implementation of the law has also resulted in problems throughout the state for police departments.

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The Alcoholism Committee of the Society and the Advisory and Coordinating Committee on Alcoholism, created by the Model Alcoholism Act, are working together to review what legislative steps could be taken to make the current law function more smoothly.

The Alcoholism Committee notes with pleasure that Rhode Island Blue Cross has covered alcoholism for more than a decade and has placed it in the same category as any other type illness and has no distinction in any of its coverages on either group or direct pay categories. In a letter to the chairman, the Blue Cross said that the basic plans provide coverage for in-hospital care at general hospitals but there is a limitation of 45 days per year in a specialized hospital.

Respectfully submitted:

ROS WELL D. JOHNSON, M.D.

Chairman

**EMERGENCY MEDICAL SERVICES
COMMITTEE**

The Emergency Medical Services Committee of the Society continues to play an active role in various aspects of Emergency Medical Care in Rhode Island. The committee-sponsored course entitled, Rescue Practices and Emergency Aid, has graduated 280 students since its start. The course has been extended from 37½ hours to 52½ hours through the inclusion of 15 in-service hours at an Emergency Room in a hospital.

The course in February of 1973 will be conducted four times a week on the Warwick campus of Rhode Island Junior College and once in the Woonsocket area at Fogarty Hospital, if the demand is sufficient to justify this schedule. If the expected 235 students pass these courses, the total volunteer rescue and ambulance personnel who will have completed these programs in June will be approximately 500. This outstanding accomplishment could not have been achieved without the generous assistance of the physicians who have put aside countless nights to lecture to the students in the EMT educational program.

With the increased courses planned for the February semester, the committee will again need the cooperation of physicians to lecture in the program.

In another area, the committee held a recent meeting with representatives of the hospital accident rooms to discuss the possibility of establishing direct radio communication from the emergency rescue vehicle to the emergency room in hospitals in the state. This system is now in effect in only two hospitals, South County and Westerly.

The physician representatives at the meeting evinced great interest in creating this system which would provide an obvious advantage to the personnel in the emergency room and to the patient being transported to the hospital. A committee representative will meet at the individual hospital, hopefully with an administrator, a member of the municipality, the physician in charge of the Emergency Room, and a representative of Motorola Corporation which makes the Hospital Emergency Administrative Radio System (HEAR). This HEAR system will also be used as the radio voice link for the electrographic telemetry system now being studied in Rhode Island.

In another matter, committee representatives have contributed regularly to the work and operation of the Citizens Advisory Committee.

Respectfully submitted:

ROBERT L. CONRAD, M.D.

Chairman

**LIAISON COMMITTEE WITH BROWN
UNIVERSITY**

The committee has met several times since the last meeting of the House and it has been informed of the developments at the Medical School. The committee was told that this year there are approximately 75 applicants for the first year of the Brown Medical Science program and approximately 200 applicants to a premedical program at Brown University.

The committee recently heard a plan to implement a "pilot" clerkship on January 31, 1973 with 12 sixth-year students doing 12 weeks in surgery and 12 weeks in medicine. The major (regular third-year) clerkship to begin August 20, 1973 with about 60 students, 36 from current fifth-year (second-year) class and 12 from current sixth year and 12 transfers from other medical schools.

The committee was also told that discussions have been held at the University of Rhode Island,

(Continued on Next Page)

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Providence College, and Rhode Island College to coordinate their pre-medical programs with that of Brown University. The possibility of adding or incorporating a Ph.D. program in the medical sciences program was also considered.

The need to develop plans for dealing with Americans studying abroad who seek to reenter medical training programs in the United States has been discussed extensively. The problem of inadequate clinical preparation was considered to be the most serious one. This was coupled with the problem of financing the needed clinical training for such students. Suggestions included seeking government legislation which would authorize state or federal agencies to underwrite the cost and the development of a Student Loan Plan to be administered by private lending agencies.

The committee has been asked by Brown that the Medical Society assist in the selection review process of prospective students by providing volunteer physicians to sit as a board of reviewers. It was believed that a board of 10 to 20 physicians would be most helpful in assessing the intangibles that an applicant might or might not possess. The membership will be solicited for its assistance in this worthy project.

In another matter, it is estimated that teaching faculty would be approximately one-third Brown Medical School members and two-thirds volunteer doctors in the community.

Respectfully submitted:

RICHARD P. SEXTON, M.D.
Chairman

CONTINUING MEDICAL EDUCATION COMMITTEE

At its most recent meeting, the Committee on Continuing Medical Education received and reviewed reports on:

1. The most successful Continuing Medical Education Conference held October 14, 1972 at the Medical Society, and;
2. The Conference on Continuing Medical Education held by the American Medical Association in Chicago.

Following the review of the reports, the committee discussed the advisability of the Rhode Island Medical Society developing a model program to conduct its own accreditation programs in Continuing Medical Education as proposed by the American Medical Association. The committee endorsed the proposal and authorized the chairman and Dr. Howard S. Browne, Jr. to prepare a model, based upon the California and Pennsylvania CME

programs for detailed review and discussion at the next meeting.

The committee heard Mr. Edward Berg, Ph.D., Executive Director of the Rhode Island Health Sciences Education Council, outline the background, purposes, and goals of that organization in attempting to systematize the education and training of those working in the health services field. The Medical Society is one of seven incorporators of the organization.

I am pleased to report that Kenneth L. Smith, D.O., and J. Jerry Rodos, D.O., representatives of the R. I. Society of Osteopathic Physicians and Surgeons, have joined our committee, and they attended our most recent meeting.

Respectfully submitted:

HENRY S. M. UHL, M.D.
Chairman

CHILD-SCHOOL HEALTH COMMITTEE

The committee has met several times to discuss the use of a form to be used in conjunction with the implementation of a program of early and periodic screening, diagnosis, treatment of children under six years of age who are eligible for medical assistance in Rhode Island. The program would be conducted under the jurisdiction of the Department of Social and Rehabilitative Services. At a recent meeting objections to the proposed form were raised by committee members.

The committee agreed that the chairman contact the director of medical assistance with an offer to help revise the form since it is not consistent with good medical practice. A shorter, simpler form is the aim of the committee.

The committee has also reaffirmed that all school health examination forms should be modeled after the one developed for the East Providence schools. The committee agreed that a mother's certification be accepted that her child has been examined and is up to date regarding immunizations.

Respectfully submitted:

WILSON F. UTTER, M.D.
Chairman

MEDICAL ASPECTS OF SPORTS COMMITTEE

The University of Rhode Island and the Rhode Island Medical Society will again co-sponsor a two-day national session on the medical aspects of sports at the University of Rhode Island on Thursday and Friday, July 26 and 27, 1973. A very large number of subjects dealing with sports medicine will be discussed at this meeting. Several leading physicians and trainers, who are particularly interested in the medical phase of sports, have agreed

to actively take part in the conference. The roster of instructors is practically complete. We will send you a copy of the preliminary program as soon as it has been completed.

Respectfully submitted:

A. A. SAVASTANO, M.D.

Chairman

DRUG ABUSE COMMITTEE

The committee exists mainly to attempt to demonstrate the Society's concern about the communities' problems with drug abuse. A prime concern is with optimizing the treatment of overdose in medical facilities. Recently the committee sponsored and coordinated a film and lecture program at Rhode Island Hospital regarding the "Hospital's Contact with the Drug Abuser". The film, "What Did You Take?" was made in the emergency rooms at a New York hospital, and it demonstrated contemporary methods of treating amphetamine, opiate, and barbiturate overdose. David Lewis, M.D., Medical Director of the Washington Center for Addictions, Dorchester, Mass., commented on the film. The meeting was well attended and the audience was mostly comprised of emergency room personnel from various hospitals, including our service hospitals, and college infirmaries.

The committee has compiled a directory of treatment facilities with the help of the Department of Mental Health, Retardation and Hospitals to distribute to physicians. A periodic newsletter to Emergency Rooms concerning drug abuse treatment is also planned.

Over the past two and a half years the committee has been considering the Comprehensive Drug Abuse Prevention and Control Act of 1970, a federal statute revising the Harrison Narcotic Act. As has occurred in 38 other states, Rhode Island must eventually adopt a similar comprehensive law to be congruent with the federal statute. There have been pieces of legislation submitted in the last two sessions. The purview of this legislation is so broad, affecting drug abusers, physicians, pharmacists alike that the committee felt that lengthy consideration about the scope of these bills should take place.

The committee was also aware that once this revision occurred, further major changes in this generation would not be likely.

The committee is suggesting to the Governor comprehensive drug legislation which adheres closely to the federal statute adopted in 1970 and it will incorporate provisions from the Uniform Code.

In other states, notably Massachusetts, legislation in this area has been passed which is onerous to the medical community and pharmacists. We hope to prevent this from happening in Rhode Island.

It is hoped that the Governor will consider these recommendations when he submits the administration's legislative proposals in this area to the General Assembly.

The committee is primarily interested in seeing that the drug abuser receives treatment and it seeks to diminish or to eliminate factors which would interfere with this contact with helping facilities.

Respectfully submitted:

JOHN E. FARLEY, JR., M.D.

Chairman

NURSING COMMITTEE

The members of the Nursing Committee of the Society have continued to serve with members of the nursing profession on the Rhode Island Joint Committee of Nurses and Physicians. At a recent meeting the committee heard a report of the excellent meeting of the National Joint Practice Commission by Mrs. Rita Adair, President of the State Nurses Association. She pointed out that the emphasis was placed on the review of each state's Nurse and Medical Practices Acts to implement recommendations flowing from the national level. The conference concluded that if the two professions didn't supply the professional manpower for physicians' assistants that non-professionals would accomplish the task.

The committee will examine certain aspects of the current nurses' role at a forthcoming meeting and it plans to invite the Director of Professional Regulation of the Rhode Island Department of Health to appear at a meeting to discuss the Medical and Nursing Acts.

Respectfully submitted:

MAURICE ADELMAN, M.D.

Chairman

STATEWIDE COMMITTEE ON PEER REVIEW

The Statewide Committee on Peer Review has now been functioning for one year. The committee has developed guidelines which are submitted to the House for approval. The committee was asked to intervene in four cases. Third party requests for Peer Review have emanated from private insurance carriers and on other occasions from Blue Shield. The committee so far has been very diligent in its work and it is functioning effectively.

Respectfully submitted:

ALTON M. PAULL, M.D. Chairman

(Continued on Next Page)

GUIDELINES OF PEER REVIEW COMMITTEES

(Revised January, 1973)

I. PREAMBLE

In order to further effective, and economical delivery of quality medical care by the physicians of Rhode Island, the Rhode Island Medical Society has established a State Society and seven District Society Peer Review Committees. The committees shall apply standards and procedures conforming to accepted professional review criteria for medical practice.

Review Committees

1. A *Statewide Peer Review Committee* shall consist of one member from each of the seven district or county medical societies in Rhode Island, and two members at large named by the House of Delegates of the Rhode Island Medical Society. The district or county society members to the State Peer Review Committee shall be appointed by the President of the Rhode Island Medical Society. The nine members of the State Committee will serve staggered three-year terms. Some terms initially will be of less than three years to provide for proper rotation. (Appendix A)

2. *District or County Society Peer Review Committees*

Each district medical society of the Rhode Island Medical Society shall establish a Peer Review Committee consisting of not more than seven or less than three members. Such committees shall be named by the current District Society Presidents, or by the policy-making bodies of the district societies, as shall be determined by the respective district societies.

3. *Consultant Specialty Peer Review Committees*

Specialty societies as designated by the State Peer Review Committee shall establish Consultant Peer Review Committees to be available at any time to assist the State Peer Review Committee, or District Peer Review Committees. (Appendix C)

Role of Peer Review Committees

Peer Review is the inclusive term for evaluation by practicing physicians of the quality and efficiency of services rendered or ordered by other practicing physicians. In-patient hospital and extended care facility utilization review, medical audit, ambulatory care review, and claims review are all aspects of peer review.

Medical Practice Analysis shall be a responsibility of the Medical Society, or other organizations designated by the Medical Society, and shall be designed to coordinate all peer review activities in the State.

II. MEETING REQUEST

1. Requests for case or problem reviews, whether from a physician, patient, or third party payor, shall be made in writing to the State Peer Review Committee through the Executive Office of the Rhode Island Medical Society, 106 Francis Street, Providence, R. I. 02903.

The State Peer Review Committee may itself review all problems or may, as it deems advisable, refer such problems to the component District Society Peer Review Committees of the area in which the physician practices.

2. A notice of the request for review shall be sent to the respondent physician.

3. All parties shall be informed of their rights and of the procedures of the Peer Review Committee.

III. CASE REFERRAL

When a problem is referred to a district society peer review committee, it shall report its findings to the State Committee in writing within 30 days. After final review by the State Committee, its decision shall be made within 30 days to the complainant. An appeal from the State Society Committee's decision may be made to the Council of the Rhode Island Medical Society, which is the final arbiter of issues involving members. It is also the only disciplinary body of the Society.

IV. REVIEW PROCESS AND PROCEDURE

1. In fee disputes, opinions will be made in terms of usual, customary, and reasonable fees, unless prior contractual agreement exists between patient and physician.
2. When a request for review is received by the Executive Officer, he will immediately check that the complaint has been fully explored by the parties involved before referring it to the State Committee on Peer Review. The Chairman, or such member as he shall designate, shall review the request and shall seek available supportive documentation he deems necessary for proper review by the Committee, and shall determine whether the request shall be referred to a District Society Peer Review Committee.
3. *Review Cases* shall not be sent directly to Specialty Review Committees which are established purely as consultant groups to provide, on request, expert advice and coun-

sel on matters involving the designated phase of specialty practice. Such Specialty Review Committees when invited to meet with the State Peer Review Committee, or a District Society Committee, should make every effort to cooperate in the deliberations of a case under investigation.

V. MEETING DATE

The State Peer Review Committee or District Peer Review Committees shall meet regularly upon the call of the respective Chairmen. They shall report promptly on determinations regarding problems submitted. They shall attempt to resolve all problems in accordance with the best interests of patient, physician, and third party.

VI. PLACE OF MEETING

The meetings of the State Peer Review Committee shall be held in the Executive Office of the Rhode Island Medical Society, 106 Francis Street, Providence, or such other place as may be designated by the Chairman of the State Peer Review Committee to be mutually agreeable to both petitioner and respondent.

(To Be Continued in July Issue)



EDITOR'S MAILBOX PSRO IN PERSPECTIVE

(Concluded From Page 241)

ganizations, medical school faculties, Blue Cross, etc., and not just physicians primarily and directly involved in patient care.

It is further stated that "membership of the Council shall include physicians who have been recommended for membership by consumer groups" (Section 275).

Section 1155 specifically describes the authority of the PSRO "to determine in advance" any elective admission to a hospital, which includes authority "to examine the pertinent records of any practitioner", and "inspect the facilities in which care is rendered or service is provided"; obviously, this includes doctors' offices.

Since this law also applies to all patients who take money from Social Security funds for any care, its program is not just limited to Medicare recipients, but extends to all Medicaid and welfare cases and, conceivably, to persons under 65 who

participate in subsidized HMOs (Health Maintenance Organizations).

Section 1160 pertains to sanctions and penalties for physicians who have "demonstrated an unwillingness or lack of ability substantially to comply with such obligations". In this case the Secretary of HEW "may exclude permanently for such period as the Secretary may prescribe such practitioner or provider from eligibility to provide such services on a reimbursable basis. A determination made by the Secretary under this subsection shall be effective . . . and shall remain in effect until the Secretary finds . . . that the basis for such determination has been removed".

"In lieu of sanctions . . . the Secretary may require that . . . such practitioners . . . pay to the U.S. . . . an amount not in excess of the actual or estimated cost of the medically improper or unnecessary services so provided, or, if less, \$5,000".

The only defense left to the physician is described in the law (Section 1160): "Any person furnishing services . . . who is dissatisfied with the determination made by the Secretary . . . shall be entitled to reasonable notice and opportunity for a hearing thereon by the Secretary . . . and to judicial review of the Secretary's final decision after such hearing". The law has no provision whatsoever to cover the general, legal, and court expenses that the physician may incur in such cases during the hearings with PSRO and the Secretary's office.

More space would be needed to discuss further other features of this law (the original bill was about 1,000 pages long, and is said to have been the longest bill ever considered by Congress).

Anybody who is sufficiently concerned about some of the aspects described above would be well advised to direct his inquiries or support to any one of the organizations that are on record as opposing the concept of PSRO.

MARIO TAMI, M.D.

President, R. I. Chapter
American Association of
Councils of Medical Staffs
of Private Hospitals, Inc.

Providence, Feb. 8, 1973.



PERIPATETICS

(Concluded From Page 212)

Chiefs who were appointed to new services are: PAUL E. BARBER, family practice; BRUNO FRANEK, psychiatric; FRANCO ERCULEI, neurosurgery; and WILLIAM D. GRAHAM, emergency room.

* * *

Rhode Island physicians who attended the first Spring meeting of The American College of Surgeons in New York City are: ROBERT GORFINE, ELIE COHEN, JESSE EDDY, 3RD, JAMES YASHAR, and ABRAHAM HORVITZ.

Also, CHARLES ROUND, CARL ANDERSON, RICHARD DYER, J. ROBERT BOWEN, THOMAS PERRY, JR., EUGENE HEALEY, and SEEBERT J. GOLDOWSKY, Editor of this Journal.

* * *

DAVID R. HALLMAN has been honored for his outstanding work in medicine and for his contribution to radiology by being named a Fellow of the American College of Radiology. Doctor Hallman was cited at a Convocation during the College's 50th annual meeting in San Francisco.



SCLEREDEMA vs. SCLERODERMA

(Concluded From Page 236)

REFERENCES

- ¹Curtis AC, Shulak BM: Scleredema adultorum. *Arch Dermatol* 92:526-41, Nov 65
- ²Fleischmajer R, Lara JV: Scleredema: A histochemical and biochemical study. *Arch Dermatol* 92:643-52, Dec 65
- ³Fleishmajer R, Faludi G, Krol S: Scleredema and diabetes mellitus. *Arch Dermatol* 101:21-6, Jan 70
- ⁴Cohn BA, Wheeler CE, Briggaman RA: Scleredema adultorum of Buschke and diabetes mellitus. *Arch Dermatol* 101:27-35, Jan 70
- ⁵Fleischmajer R, Perlsh JS: Glycosaminoglycans in scleredema and scleroderma. *J Invest Dermatol* 58: 129-32, Mar 72
- ⁶Kobayasi T, Asboe-Hansen G: Ultrastructure of generalized scleroderma. *Acta Derm Venereol* (Stockholm), 52:81-93, 1972.

Bencel L. Schiff, M.D.
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Pawtucket, R. I. 02861



DISTRICT COUNTY MEDICAL SOCIETY MEETING

(Concluded From Page 213)

The Nominating Committee brought forward the following slate of officers for the year 1973:

President: Alfred Gobeille, M.D.

First Vice President: Robert Knisley, M.D.

Second Vice President: Charles Farrell, M.D.

Secretary: Francis M. Palaia, M.D.

Treasurer: William McDermott, M.D.

Representative to the Council: F. Bruno Agnelli, M.D.

Representative to the House of Delegates: James McGrath, M.D., Erwin Siegmund, M.D., John Elliot, M.D., Louis Morrone, M.D.

Executive Committee: Gordon Menzies, M.D., Mildred Robinson, M.D., Gregory Burbelo, M.D.

Credentials Committee: Attilio Manganaro, M.D., John Pinto, M.D., Jacob Pysairw, M.D.

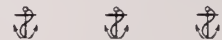
Peer Review: John Walsh, M.D., Louis Morrone, M.D.

A motion to accept the nominations, and the Secretary cast one vote, was made by Doctor Ruisi and seconded by Doctor Agnelli.

The meeting was adjourned at 12:45 p.m.

Respectfully submitted:

FRANCIS M. PALAIA, M.D.



COMPARATIVE STUDY OF IN-HOSPITAL PRACTICE IN RHODE ISLAND

(Concluded From Page 234)

tals have been compared with university-affiliated hospitals of a comparable nature outside of the State of Rhode Island.

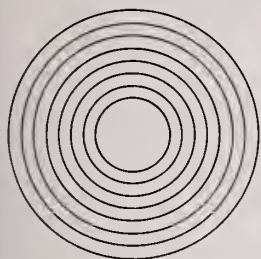
3. Broad areas for improvement in hospital practice have been suggested.

4. It is suggested that individual hospitals using CPHA data make self-assessments, using both the absolute and comparative data as aids.

Xeroxed copies of the basic data used in this analysis are available on request to the author.

Paul B. Metcalf, Jr., M.D.
66 Summit Street
Pawtucket, R.I. 02860





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Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitor and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

Valium® (diazepam)

To help you manage excessive psychic tension

Rhode Island Medical Journal

JULY, 1973

VOLUME 56, NO. 7

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COVER: Photograph of one of fourteen bas reliefs called Infants in Swaddling Clothes. On facade of the Hospital of the Innocents, Florence, Italy. Architect, Filippo Brunelleschi. Constructed in 1419. Artist, Andrea della Robbia.

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The diabetic who has too much... too much sugar, too much fat.

Maybe the last thing she needs is more of her own insulin. Especially when you consider that many overweight diabetics already have normal or high levels of endogenous insulin and that insulin is lipogenic.

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phenformin HCl

lowers blood sugar without raising blood insulin.

For complete details, including dosage, please read the prescribing information. It's summarized below.

DBI-TD® phenformin HCl
Tablets of 25 mg.
DBI-TD® phenformin HCl
Oral Disintegration
Capsules of 50 and 100 mg.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.
Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); fasting or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); any disease states associated with hypoxemia.
Warnings: Use during pregnancy is to be avoided.
Precautions: 1. **Starvation Ketosis:** This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of rel-

atively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. **Lactic Acidosis:** This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. **Hypoglycemia:** Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-E (6/72)

For complete details, including dosage, please see full prescribing information.

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What should a medication for sleep be expected to provide?



Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported at recommended doses, use caution in administering to addiction prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, initial dosage should be limited to 15 mg to preclude oversedation, dizziness, or ataxia. If combined with other drugs having hypnotic or CNS depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with

Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

Sleep with consistency

Dalmane has been shown to be consistently effective even during consecutive nights of administration. Thus there is little likelihood for the need to increase dosage to maintain therapeutic effect.

Dalmane (flurazepam HCl) is a distinctive sleep medication—a benzodiazepine specifically indicated for insomnia. It is not a barbiturate or methaqualone, nor is it related chemically to any other available hypnotic.

Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane; no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights. Dalmane is generally well tolerated and morning "hang-over" is relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in elderly and debilitated patients. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

DALMANE[®]

(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule h.s.—usual adult dosage
(15 mg may suffice in some patients)

One 15-mg capsule h.s.—initial dosage for elderly or debilitated patients.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

depression or suicidal tendencies
ic blood counts and liver and kid-
nction tests are advised during
ed therapy. Observe usual precau-
n presence of impaired renal or
e function

Side Reactions: Dizziness, drowsi-
ghtheadedness, staggering, ataxia
ling have occurred, particularly
rly or debilitated patients. Severe
on, lethargy, disorientation and
probably indicative of drug intoler-
overdosage, have been reported

Also reported were headache, heart-
burn, upset stomach, nausea, vomiting,
diarrhea, constipation, GI pain, nervous-
ness, talkativeness, apprehension, irri-
tability, weakness, palpitations, chest
pains, body and joint pains and GU com-
plaints. There have also been rare occur-
rences of sweating, flushes, difficulty in
focusing, blurred vision, burning eyes,
faintness, hypotension, shortness of
breath, pruritus, skin rash, dry mouth,
bitter taste, excessive salivation, anorexia,
euphoria, depression, slurred speech,

confusion, restlessness, hallucinations,
and elevated SGOT, SGPT, total and direct
bilirubins and alkaline phosphatase.
Paradoxical reactions, e.g., excitement,
stimulation and hyperactivity, have also
been reported in rare instances.

Dosage: Individualize for maximum bene-
ficial effect. **Adults:** 30 mg usual dosage;
15 mg may suffice in some patients.

Elderly or debilitated patients: 15 mg
initially until response is determined.

Supplied: Capsules containing 15 mg or
30 mg flurazepam HCl.

"Prescription drugs – who should determine the maker?"

Dispenser of
Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of
Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine..."

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist, made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will not have expert knowledge of no more than

ould be an obligation of medical practice...

"Medical societies ought to continue campaigns to point out the substantial savings that could be realized thru deductible insurance protection for catastrophic illnesses. At the very least, they should, in the patients' interest, question the policies of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's sense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. All the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

to drugs that he selects to treat the majority of conditions encountered in practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making substitution. I would judge that the courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could slow legalization of substitution. I have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

Summary

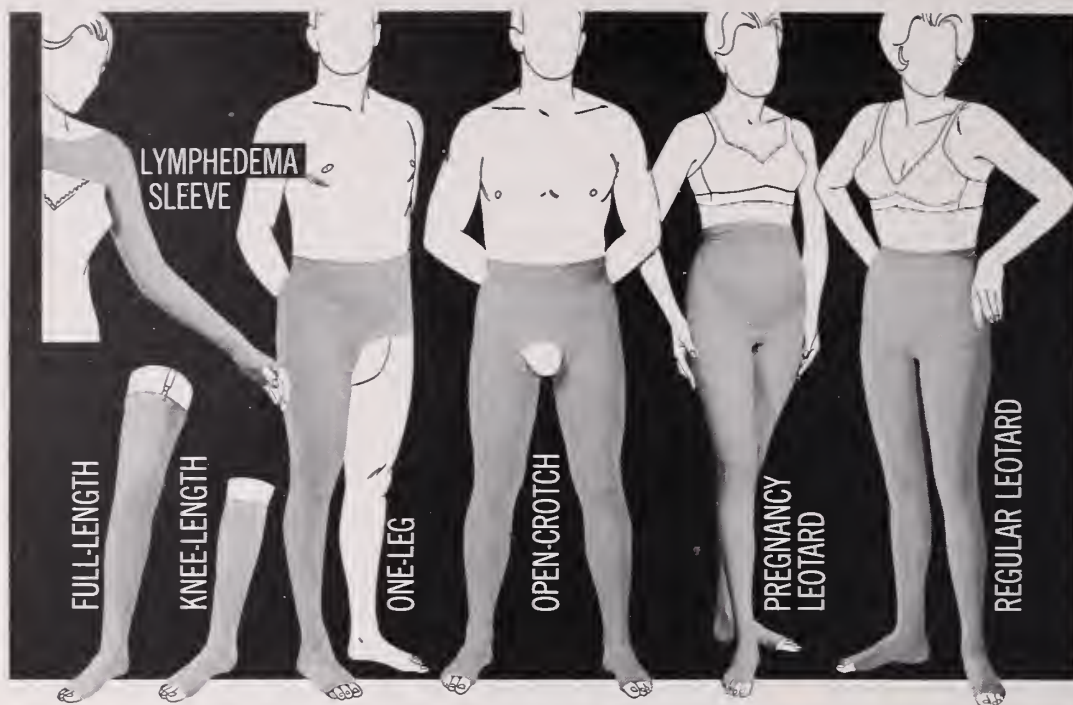
In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005





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EL 1-0800

Health And Welfare Legislation Enacted By The Rhode Island General Assembly-January Session, 1973

Abortion

After a vigorous discussion of the issues, the General Assembly passed and the governor signed an abortion bill. The act repealed the existing chapter dealing with abortions, but also re-enacted a new chapter on abortion and included the legislative determination that life commences at the instant of conception. The statute, however, was declared unconstitutional by a recent U. S. District Court.

Alcoholism

The legislators favored the amendment of the Model Alcoholism Act which was approved last year. The amendments included the extension of time from two to five days that a person incapacitated by alcohol can be detained and it also permits a doctor employed by the admitting facility to be a certifying physician. Another bill signed by Governor Noel provides that if it is impracticable to take a person to an approved emergency treatment facility, the police may take the person into protective custody in the police station in suitable quarters for a reasonable time.

In a companion matter, the legislature approved the creation of a 13 member special commission to study, consolidate, and amend all laws pertaining to alcoholic beverages and to make a report no later than March 29, 1974.

Blood

The General Assembly passed resolutions to fund the Knights of Columbus Blood Bank with \$1,000; for the Veterans of Foreign Wars Bloodmobile, \$2,000; and for the American Legion Bloodmobile, \$3,000.

Drugs

Two Administration drug bills passed both Houses and were signed into law by Governor Noel. One bill expanded the membership of the Permanent Advisory Council on Drug Abuse Control from 15 to 23 members. One member would be a designee of the Medical Society who would be appointed by the governor. The function of the Council was expanded to include the preparation of a comprehensive drug prevention and treatment plan and the development of operational and personal standards for programs to be funded within the approved comprehensive plan.

The second proposal expands the definition of narcotic addict for the purpose of civil commitment to include persons dependent on the use of a depressant or stimulant substance.

The legislature also passed a measure which extends the motor vehicle implied consent law to intoxicating liquor, narcotic drug, barbiturate, toluene, or any central nervous stimulant, and it extends its scope to all vehicles operated in the state whether or not on a public highway. The bill empowered the director of health to make and to file with the secretary of state regulations which prescribe the techniques and methods of chemical analysis and the qualifications and certification of individuals authorized to administer such testing and analysis.

Emergency Medical Technicians

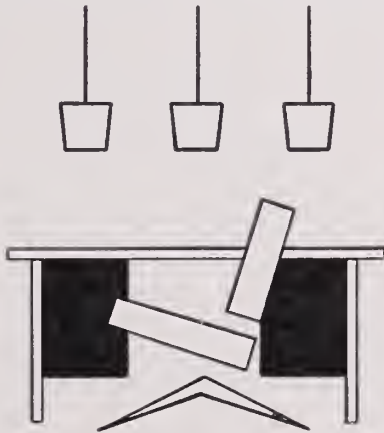
A bill sponsored by the R. I. Heart Association and endorsed by the Society's committee on Emergency Medical Services to permit the use of ad-

(Continued on next page)

Attractive & Functional Offices

by **BENÉ & CO.**

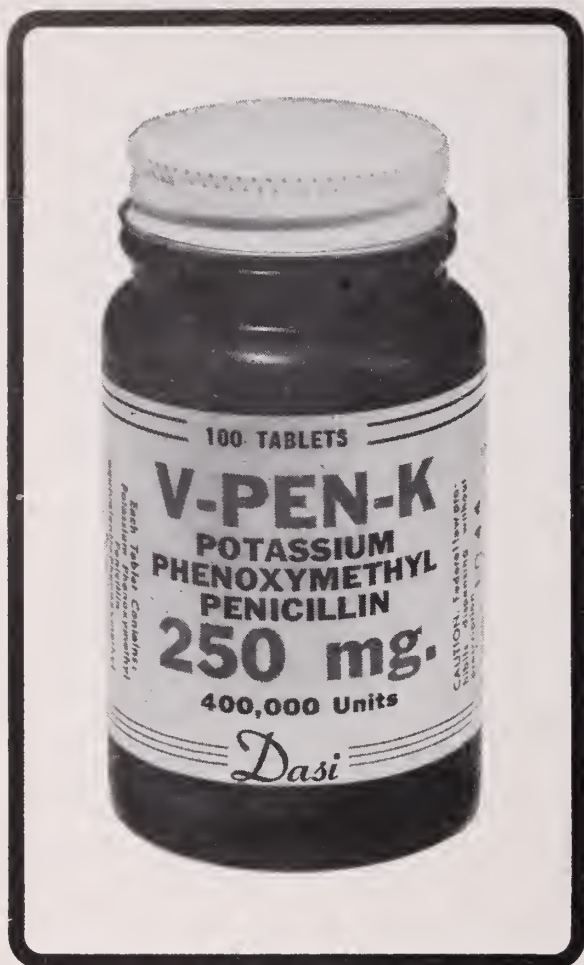
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PRESCRIBE IT BY NAME

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Potassium

Phenoxymethyl

Penicillin

250 mg. Tablets 400,000 units

GENERICALLY PRICED

DASI Pharmaceutical

PROVIDENCE, RHODE ISLAND

vanced EMTs for the delivery of emergency care to the sick and injured during transport to the hospital met with the approval of both Chambers and was signed by Governor Noel.

The bill outlined the medical procedures which the advanced EMTs may perform.

Foster Children

A bill was passed to create a 16 member commission on foster child placement. The commission will include a member of the Rhode Island Chapter of the American Academy of Pediatrics.

Health Services Council

A bill to extend the duties of the health services council to include nursing and personal care homes won the endorsement of the General Assembly.

Hearing and Speech

Although the bill was opposed by the Medical Society and the Rhode Island Otolaryngology Society, a measure creating the state Board of Hearing Aid Dealers and Fitters to provide for the licensing of persons who are dealers and fitters of hearing aids with the Department of Business Regulation passed both Chambers and was signed by Governor Noel. The measure provides that the Department be advised by a five man board which would include a single otolaryngologist. The bill also prohibits the sale of a hearing aid within 90 days under certain conditions but beyond that amount of time, the hearing aid dealer would be permitted to sell to any prospective buyer. The bill also provides that when dealing with a child under 10 years of age the hearing aid dealer must ascertain whether the child has been examined by an otolaryngologist and an audiologist within 90 days prior to the fitting. Beyond the 90 day period, the hearing aid dealer could then sell to a child under 10 years of age. The bill also included no medical protection for the elderly, a large group of citizens where the risk of active ear disease is great.

Approved by the General Assembly was a proposal for the establishment within the Department of Health a Board of Speech Examiners of Speech Pathology and Audiology. The board will consist of 5 persons who are working in Rhode Island, one who has been engaged in rendering service teaching or research in speech pathology or audiology, an audiologist, two speech pathologists, and a representative of the public and an otolaryngologist.

Hospital Licensing

The Assembly passed a proposal to revise the definition of a health care corporation to include

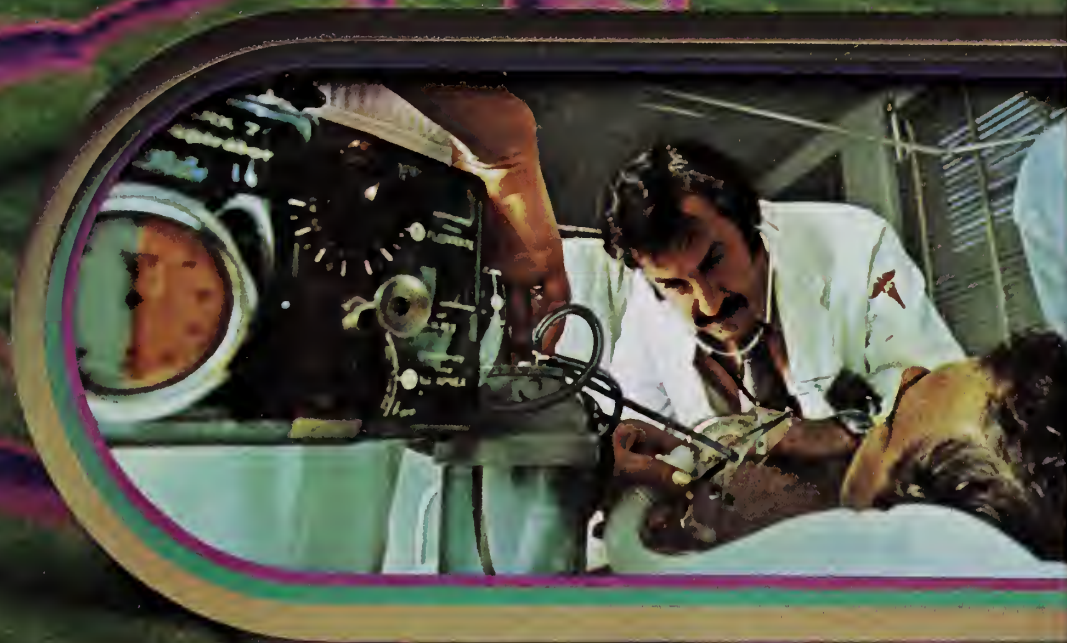
(Continued on page 257)

Schering

On all in-patient
services...

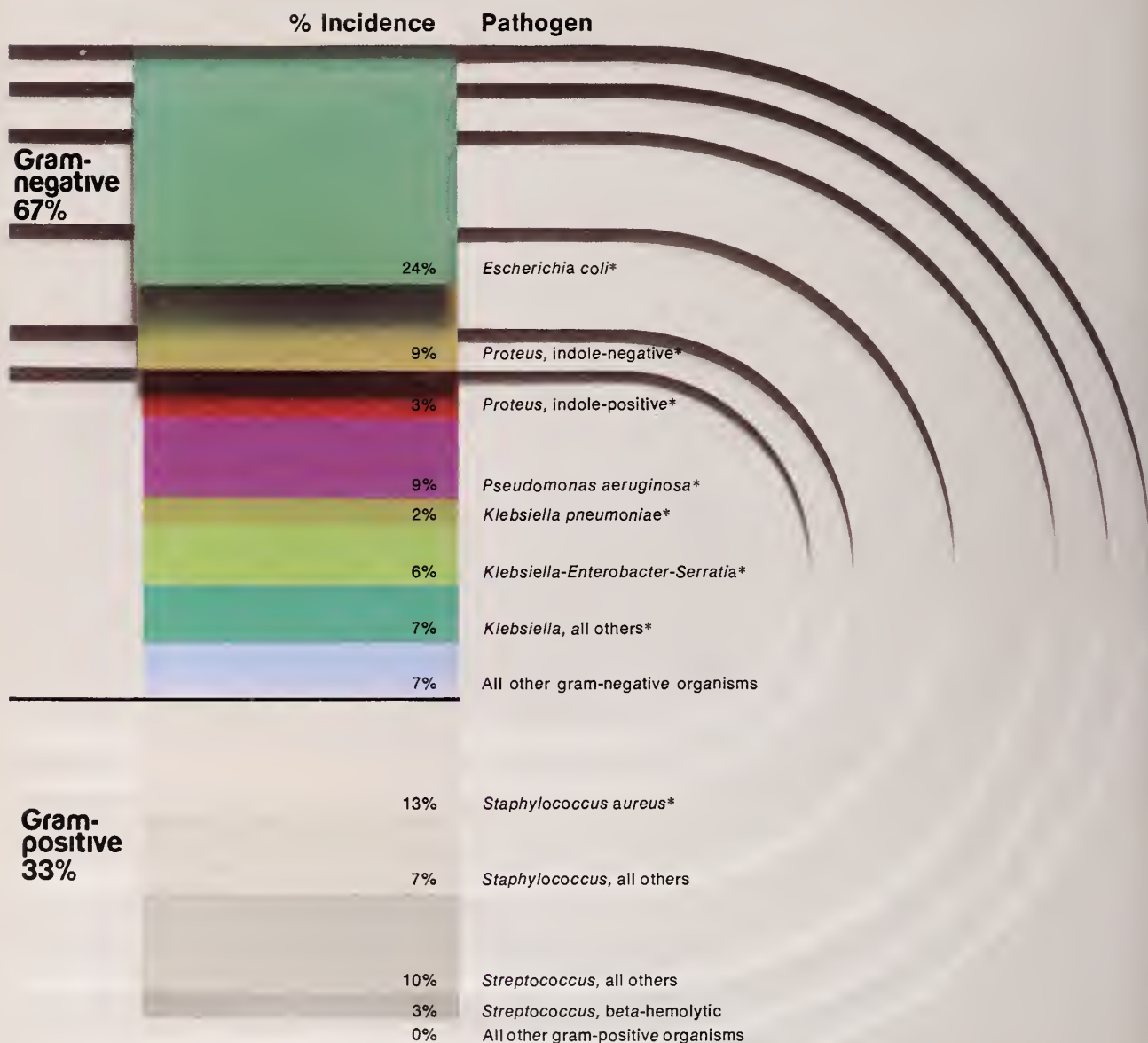
a major problem

2 out of 3
nosocomial infections
are gram-negative



Gram-negative bacteria magnified 10,000 times—color-tinted

Commonly encountered pathogens on all hospital services



Total pathogens 21,972
Source: Gosselin Audit of Pathology Cultures—1971

*GARAMYCIN Injectable is effective against susceptible strains of the pathogens indicated.

A highly appropriate spectrum for today's problem pathogens

GARAMYCIN Injectable offers a high probability of effectiveness against susceptible strains of seven out of seven major gram-negative pathogens. These are:

Escherichia coli
Proteus, indole-negative
Proteus, indole-positive
Pseudomonas aeruginosa
Klebsiella
Enterobacter } species
Serratia

GARAMYCIN Injectable has also been shown to be effective in serious staphylococcal infections. It may be considered in those infections when penicillins or other less potentially toxic drugs are contraindicated and bacterial susceptibility testing and clinical judgment indicate its use.

Start with Garamycin

■ Broad gram-negative spectrum

Because of its broad gram-negative spectrum and its well-established clinical efficacy, GARAMYCIN Injectable can be considered for initial therapy in suspected as well as documented gram-negative sepsis.

Stay with Garamycin

■ Susceptibility of causative organisms confirmed

The results of susceptibility tests will, in most cases, demonstrate the causative organisms' sensitivity to GARAMYCIN Injectable. However, the decision to continue therapy with this drug should also be based on the severity of the infection and the important additional concepts contained in the Warning Box.

■ Relatively low incidence of adverse reactions

Risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

■ Bacterial resistance has not been a problem

In the laboratory, resistance has been demonstrated to develop slowly in stepwise fashion. No one-step mutations to high resistance have been reported to date.



On all in-patient services...

Garamycin[®]
gentamicin
sulfate

I.M./I.V.

40 mg. per cc.

Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin

serious gram-negative infections (pneumonia, urinary tract infections, septicemia, and wound infections)* to susceptible organisms

WARNING

Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

Ototoxicity, both vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment.

Monitoring of renal and eighth nerve function is recommended during therapy of patients with known impairment of renal function. This testing is also recommended in patients with normal renal function at onset of therapy who develop evidence of nitrogen retention (increasing BUN, NPN, creatinine or oliguria). Evidence of ototoxicity requires dosage adjustments

or discontinuance of the drug.

In event of overdose or toxic reactions, peritoneal dialysis or hemodialysis will aid in removal of gentamicin from the blood.

Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic and/or nephrotoxic drugs, particularly streptomycin, neomycin, kanamycin, cephaloridine, viomycin, polymyxin B, and polymyxin E (colistin), should be avoided.

The concurrent use of gentamicin with potent diuretics should be avoided, since certain diuretics by themselves may cause ototoxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity.

USAGE IN PREGNANCY Safety for use in pregnancy has not been established.

**On all in-patient services...
in hospital-acquired gram-negative infections***

Garamycin®

gentamicin sulfate

Injectable

I.M./I.V.

40 mg. per cc.

Each cc. contains
gentamicin sulfate equivalent
to 40 mg. gentamicin

Also available:
GARAMYCIN® Pediatric Injectable, 10 mg. per cc.

GARAMYCIN® Injectable, brand of gentamicin sulfate U.S.P., injection, 40 mg./cc.
Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin
For Parenteral Administration

WARNING

Patients treated with GARAMYCIN Injectable should be under close clinical observation because of the potential toxicity associated with the use of this drug.

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Serum concentrations should be monitored when feasible and prolonged concentrations above 12 mcg./ml. should be avoided.

Concurrent use of other neurotoxic and/or nephrotoxic drugs, particularly streptomycin, neomycin, kanamycin, cephaloridine, viomycin, polymyxin B, and polymyxin E (colistin), should be avoided.

The concurrent use of gentamicin with potent diuretics should be avoided, since certain diuretics by themselves may cause ototoxicity. In addition, when administered intravenously, diuretics may cause a rise in gentamicin serum level and potentiate neurotoxicity.

USAGE IN PREGNANCY Safety for use in pregnancy has not been established.

INDICATIONS GARAMYCIN Injectable is indicated, with due regard for relative toxicity of antibiotics, in the treatment of serious infections caused by susceptible strains of the following microorganisms:

Pseudomonas aeruginosa, *Proteus* species (indole-positive and indole-negative), *Escherichia coli* and *Klebsiella-Enterobacter-Serratia* species.

Clinical studies have shown GARAMYCIN Injectable to be effective in septicemia and serious infections of the central nervous system (meningitis), urinary tract, respiratory tract, gastrointestinal tract, skin and soft tissue (including burns).

Bacteriologic tests to determine the causative organisms and their susceptibility to gentamicin should be performed.

Bacterial resistance to gentamicin develops slowly in stepwise fashion; there have been no one-step mutations to high resistance.

In suspected or documented gram-negative sepsis, GARAMYCIN may be considered as initial therapy. The decision to continue therapy with this drug should be based on the results of susceptibility tests, the severity of the infection, and the important additional concepts contained in the Warning Box. In the neonate with suspected sepsis or staphylococcal pneumonia, a penicillin type drug is usually indicated as concomitant antimicrobial therapy.

GARAMYCIN Injectable has been shown to be effective in serious staphylococcal infections. It may be considered in those infections when penicillins or other less potentially toxic drugs are contraindicated and bacterial susceptibility testing and clinical judgment indicate its use.

CONTRAINDICATIONS A history of hypersensitivity to gentamicin is a contraindication to its use.

WARNINGS See Warning Box.

PRECAUTIONS Neuromuscular blockade and respiratory paralysis have been reported in the cat receiving high doses (40 mg./kg.) of gentamicin. The possibility of these phenomena occurring in man should be considered if gentamicin is administered to patients receiving neuromuscular blocking agents such as succinylcholine and tubocurarine.

Treatment with gentamicin may result in overgrowth of nonsusceptible organisms. If this occurs, appropriate therapy is indicated.

ADVERSE REACTIONS

Nephrotoxicity: Adverse renal effects, as demonstrated by rising BUN, NPN, serum creatinine and oliguria, have been reported. They occur more frequently in patients with a history of renal impairment treated with larger than recommended dosage.

Neurotoxicity: Adverse effects on both vestibular and auditory branches of the eighth nerve have been reported in patients on high dosage and/or prolonged therapy. Symptoms include dizziness, vertigo, tinnitus, roaring in the ears and hearing loss. Numbness, skin tingling, muscle twitching, and convulsions have also been reported.

Note: The risk of toxic reactions is low in patients with normal renal function who do not receive GARAMYCIN Injectable at higher doses or for longer periods of time than recommended.

Other reported adverse reactions, possibly related to gentamicin, include increased serum transaminase (SGOT, SGPT), increased serum bilirubin, transient hepatomegaly, decreased serum calcium; splenomegaly, anemia, increased and decreased reticulocyte counts, granulocytopenia, thrombocytopenia, purpura; fever, rash, itching, urticaria, generalized burning, joint pain, laryngeal edema; nausea, vomiting, headache, increased salivation, lethargy and decreased appetite, weight loss, pulmonary fibrosis, hypotension and hypertension.

DOSAGE AND ADMINISTRATION GARAMYCIN Injectable may be given intramuscularly or intravenously.

For Intramuscular Administration:

PATIENTS WITH NORMAL RENAL FUNCTION*

Adults: The recommended dosage for GARAMYCIN Injectable for patients with serious infections and normal renal function is 3 mg./kg./day, administered in three equal doses every 8 hours.

For patients weighing over 60 kg. (132 lb.), the usual dosage is 80 mg. (2 cc.) three times daily. For patients weighing 60 kg. (132 lb.) or less, the

usual dose is 60 mg. (1.5 cc.) three times daily.

In patients with life-threatening infections, dosages up to 5 mg./kg./day may be administered in three or four equal doses. This dosage should be reduced to 3 mg./kg./day as soon as clinically indicated.

*In children and infants, the newborn, and patients with impaired renal function, dosage must be adjusted in accordance with instructions set forth in the Package Insert.

For Intravenous Administration:

The intravenous administration of GARAMYCIN Injectable is recommended in those circumstances when the intramuscular route is not feasible (e.g., patients in shock, with hematologic disorders, with severe burns, or with reduced muscle mass).

For intravenous administration, in adults, a single dose of GARAMYCIN Injectable may be diluted in 100 or 200 cc. of sterile normal saline or in a sterile solution of dextrose 5% in water; in infants and children, the volume of diluent should be less. The concentration of gentamicin in solution, in both instances should normally not exceed 1 mg./cc. (0.1%). The solution is infused over a period of 1 to 2 hours.

The recommended dose for intravenous administration is identical to that recommended for intramuscular use.

GARAMYCIN Injectable should not be physically pre-mixed with other drugs, but should be administered separately in accordance with the recommended route of administration and dosage schedule.

HOW SUPPLIED GARAMYCIN Injectable, 40 mg. per cc., 2 cc. multiple-dose vials for parenteral administration.

Also available, GARAMYCIN Pediatric Injectable, 10 mg. per cc., 2 cc. multiple-dose vials for parenteral administration.

APRIL, 1972
AHFS Category 8:12.28

For more complete prescribing details, consult Package Insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Professional Services Department, Schering Corporation, Kenilworth, New Jersey 07033.

*Due to susceptible organisms

HEALTH AND WELFARE LEGISLATION

(Continued from page 256)

all corporations charging periodic as well as annual premiums.

Marathon House

A resolution asking for an appropriation of \$50,000 for Marathon House was considered by the legislators; it was reduced to \$20,000 and subsequently signed by the governor. This was the amount appropriated in 1972.

Medical Examiner

Winning the endorsement of the General Assembly was a measure that would establish in the Department of Health, the office of state medical examiner. The enactment of the proposal meant the transfer of the office from the Department of the Attorney General to the Health Department and it creates a commission of nine members, including the President of the Rhode Island Medical Society, the President of the Rhode Island Society of Pathologists, and the Vice President of the Brown University Division of Biological and Medical Sciences or their designees, who will provide advice and consent to the appointment of a chief medical examiner by the governor.

Mental Health

Several measures concerning mental health were adopted by the General Assembly and were signed into law by Governor Noel. One concerned the reform of existing procedures in criminal cases where a defendant is incompetent to stand trial or is acquitted by reason of insanity.

An appropriation of \$5,000 to the Rhode Island Association of Mental Health for the operation of its summer camp was approved by the General Assembly; a request of \$25,000 for Talbot House, a rehabilitation facility for alcoholics, was reduced to \$5,000 and was passed by the General Assembly.

Mentally Retarded

The legislators adopted a resolution which was signed by the governor providing declaration of rights for the mentally retarded.

Occupational Health

Two bills pertaining to Occupational Health were adopted by the Assembly and signed by the governor. One act would create a Division of Occupational Health in accordance with the provisions in the federal occupational health and safety act. This division would be under the jurisdiction of the state Department of Health. All enforcement procedures would be carried out by the Division.

(Continued on next page)

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sion of Occupational Safety in the Department of Labor.

The second proposal enacted updated the existing statutes in the field of occupational health and safety to conform with the federal law. It would rename the present division of industrial inspection, the division of occupational safety and retain the division with the Labor Department.

Rubella

The legislature amended the rubella hemagglutination inhibition test to exclude women 55 years or older, those previously immunized or tested as evidenced by a physician's certificate. Also excluded would be those unable to bear children or whose pregnancy at the time of application is certified by a physician.

Sight

Approved was a \$2,000 appropriation to the Rhode Island Sight Foundation.

IMPORTANT BILLS NOT PASSED

Governor Noel vetoed two bills concerning non-medical facilities. One concerned a rejection of a \$10,000 appropriation for the House of Hope which, the governor stated in his veto message, had funds in the state budget; a second veto involved a \$10,000 appropriation for the rehabilitation of alcoholics at Halfway House. The bill had inaccurately stated "ex-convicts".

Among the hundreds of proposals that died in General Assembly committees were two drug measures. One would have established a drug formulary commission and mandated that every physician who prescribes by brand name a drug listed in the formulary must include in each prescription the generic or chemical name.

A Controlled Substances proposal, drafted by the Committee on Drug Abuse of the Society, was submitted to the Administration. The measure subsequently was rewritten to include a triplicate prescription provision; the bill passed the House but was received in the closing days of the session by the Senate. It failed to emerge from the Senate Judiciary Committee.

Also failing to win favor was a drug labeling bill which provided that no person could sell at retail any prescribed medication without distinctly labeling the ingredients of the medication on the box, or vessel in which the medicine is contained.

Rejected by the legislators were proposals to establish a Division of Child Abuse within the state Department of Social and Rehabilitative Services; that diabetics who have a doctor's permit be

exempt from a state requirement to register annually with the Department of Health their possession of a hypodermic needle and a syringe; and that the drug, scopolamine, be sold only by prescription.

A proposal to allow the practice of acupuncture in Rhode Island failed to make headway in the legislature. The measure would have permitted non-medical personnel to qualify as a doctor of acupuncture if they met certain requirements, including education, experience, and a successful examination satisfactory to the board. Applicants also must be 21 years of age, be a U.S. citizen, be of good moral character and pay the license fee. The Board would have been comprised of seven members, including four practitioners of acupuncture, one licensed physician who is a doctor of medicine, an osteopath and an educator who is bilingual and holds a doctorate or equivalent degree in non-medically related subject which relates to the understanding of the history, theory, and practice of acupuncture. (The R. I. Medical Society's position is that acupuncture is a procedure to be done by doctors of medicine and osteopathy.)

Four bills were introduced into the General Assembly concerning the basic training of Emergency Medical Technicians and the equipping of emergency rescue vehicles. All four failed to win approval.

Three chiropractic bills were introduced into the General Assembly and all failed to move from committee in the Senate. The bills would have permitted chiropractors the use of a hypodermic needle or syringe, would have allowed chiropractic participation in any medical plan involving the expenditure of state funds, and the third measure would have allowed chiropractors to be paid by any non-profit medical service corporation within the redefinition of medical services to include chiropractic services.

Also failing to win approval was a proposal which would have required hospitals to administer tests to determine if a person is intoxicated upon the request of the police department.

A measure that would have mandated reimbursement for any optometric service to a subscriber to a group accident, accident, group health or group accident and health insurance policy met with defeat as well as a proposal which would have provided for the regulation by the director of health of premises containing lead paint. This latter meas-

(Continued on next page)

Hopkins

Profile "20"

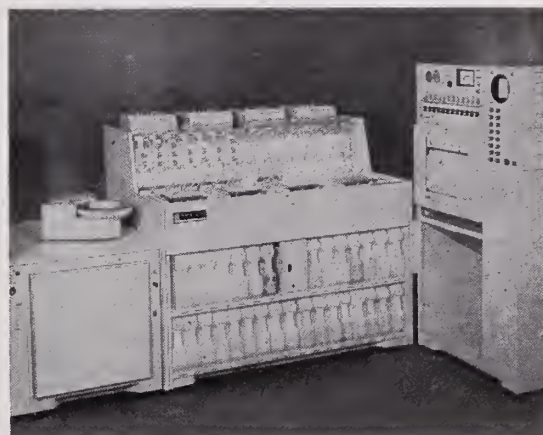
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ure passed the Senate but failed to get through the House.

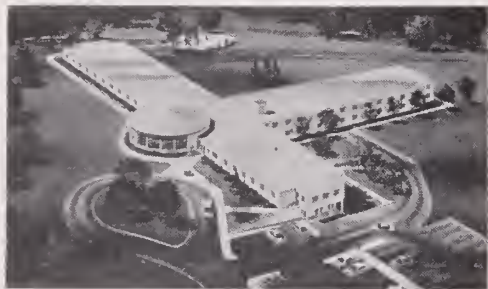
Another chiropractic measure would have required those practitioners to furnish evidence that each individual has completed 12 hours of instruction in chiropractic related subjects in the year prior to the renewal date of his license.

A measure which would have required the chief medical examiner to perform an autopsy if requested by the parents of a child suspected of having died as a result of a "crib death" failed to win endorsement of the Assembly.

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Supported by the Highway Safety Committee of the Society but failing to obtain legislative endorsement was a proposal which would have required the Division of Motor Vehicles accident reports and police reports to contain information concerning whether or not the operator and passengers in a motor vehicle involved in any accident were wearing seat belts. The bill also asked if any of them were ejected from the car as a result of the accident.

A bill to mandate consecutively numbered prescription forms with the imprinted seal of the prescriber when administering narcotic drugs did not emerge from committee. The prescriber would also have had to have on the prescription his federal narcotic registry number.

Also stalled in committee was a bill providing that hospital rates be controlled by the public utilities committee, and that an assault on a physician while pursuing his profession would constitute a felony.

The General Assembly again showed its disinterest in a bill to reduce from .10 to .08 per cent the weight of alcohol in a person's blood which would give rise to the presumption of intoxication. A similar bill was introduced in recent years by the Society but it failed to win approval.

Another bill failing to win approval from the General Assembly concerned an act prohibiting non-profit hospital service corporations non-profit medical service corporations, and private insurance companies from denying payments to hospitals, clinics, licensed medical practitioners and clinical psychologists for mental illness.

Based upon the Patients Bill of Rights promulgated by the American Hospital Association, a proposal was introduced to legislate patients rights, but the bill did not emerge from the House Health, Education, and Welfare Committee.



PHASE IV

Relative to President Nixon's Phase IV Anti-Inflation Program, the executive office has received the following statement from AMA:

"The Health Services Industry is removed from the Freeze immediately and returned to mandatory Phase III control. This gives health relatively relaxed treatment until August 12. This means that physicians are restricted to 2.5 per cent on professional fees and 5.5 per cent on salaries. The sign remains. Final Phase IV regulations will be announced by August 12."

House Of Delegates Of The Rhode Island Medical Society

Report of the Meeting of January 24, 1973

PEER REVIEW GUIDELINES

(Continued from June, 1973 Issue)

VII. CONDUCT OF THE MEETING

1. Meetings shall be conducted with the objective of providing to all parties a full and fair hearing and to enable the committee to reach a fair decision.

2. Committee members shall have the privilege of asking questions of respondents or petitioners to clarify issues placed before the committee.

3. Meetings shall be formally opened by the Chairman, or a member designated by him in his absence to act as chairman with a reading of an opening statement containing the complaint or a description of the problem. The meeting shall be conducted in an informal manner and the rules of evidence as used in court proceedings shall not necessarily be applicable.

4. A quorum of the State Peer Review Committee shall consist of not less than 50 per cent of its members, one of whom shall be Chairman or a member designated by the Chairman to be Chairman pro Tempore.

5. Summaries of meetings, together with any other data which the committee deems pertinent to matters under advisement, along with the written decisions, shall be recorded and considered confidential.

6. The process of Peer Review shall be conducted in such a manner that the individual or agency whose services are being reviewed and the involved recipient of care have full protection of their rights to confidentiality. Under no circumstances should the data be duplicated or recorded elsewhere or rendered available to groups that are not connected with the Review process.

VIII. COMPULSORY ATTENDANCE

Complainants or petitioners or their representatives shall attend meetings unless granted permission in writing by the Chairman of the State Peer Review Committee not to attend. Failure of complainants or petitioners to attend scheduled meetings where not excused by the Chairman may be deemed a withdrawal of the complaint or petition.

IX. REPRESENTATION

1. Witnesses may be presented on behalf of either party to the review, and either party may examine witnesses called by the other. The Committee shall have the right to call consultants, such as members of a Consultant Specialty Peer Review Committee, and witnesses.

2. Records and documents may be introduced by either party, and shall be subject to examination at the hearing by: (1) members of the Peer Review Committee, (2) the complainant, or (3) the respondent.

3. With the permission of the Chairman, examination of records and documents by any of the above may take place before or after as well as during the hearing.

4. The parties concerned shall be provided an opportunity to explain any difficulties with respect to the inclusion of any records or documents.

(Continued on page 295)

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The four papers in this pediatric symposium have been selected from the Eighth (1971) and Ninth (1972) Annual Maurice N. Kay Symposia. The first two papers are from the former on the subject of Early Physical Maturity — the Psychological, Sexual, and Social Problems and the second pair from the latter on Drug Metabolism and Therapy in Infancy and Childhood — Perspectives in Pediatric Pharmacology. The Introductory Remarks derive from both the 1971 and 1972 meetings.

I. Introductory Remarks

Eighth Maurice N. Kay Pediatric Symposium October 6, 1971

By Mary B. Arnold, M.D.

I should like to convene the Eighth Annual Maurice N. Kay Pediatric Symposium at the Roger Williams General Hospital.

I should like to welcome all of our guests assembled here and extend a very special welcome to Mrs. Maurice Kay and Mrs. R. Cannon Eley.

To our moderator and invited speakers, I should like to say thank you from all of us for agreeing to participate in this interesting and surely to be lively symposium. Let me also introduce to you a member of our Board of Trustees, Mr. Robert Rothman.

Before proceeding with the scientific portion of the program, I should like to pay a brief memorial tribute to the late Doctor R. Cannon Eley, who as many of you knew was the inspirational force behind all of these annual symposia, including this one today. Cannon died on April 29, 1971.

Time does not permit a review of his most distinguished scholarly and productive career. After spending 36 years as a leader and teacher in Pediatrics at Children's Hospital Medi-

cal Center in Boston, Doctor Eley resigned his position there in June of 1963 to accept a position here as Chairman of the Department of Pediatrics and Professor of Pediatrics at Brown University. One of Doctor Eley's many interests in medicine, which resulted in a major contribution to the Pediatric world, was that of Post-Graduate Medical Education. It was in this pursuit that he made a major impact here in Providence, even before his formal appointment at this Hospital. From 1960-1962 Doctor Eley, in collaboration with Doctor Kay, produced the first Post-Graduate Pediatric Symposium at Roger Williams General Hospital. Following the untimely death of Doctor Kay, the subsequent programs were named in his honor. Doctor Eley, the architect and guiding force behind these programs, made the Kay Symposium one of the outstanding medical events in the Providence Area. In addition to his academic genius, Cannon was a vividly warm human being, whose wit, total loyalty, and genuine concern for his fellow man brought him universal love and respect.

At the time of his death, Doctor Eley had actually planned the program which you are about to hear today. He had conceived its scope, its pertinence to today's pediatric scene, and had carefully selected and invited each speaker whom he knew

(Continued on next page)

MARY B. ARNOLD, M.D., of Providence, Acting Chairman, Pediatric Department, Roger Williams General Hospital, Providence; and Associate Professor of Pediatrics (Clinical), Brown University Medical School, Providence

could meld his particular expertise into a smooth, informative, and pertinent scientific session. I will predict that its content is as yet another testimony to the brilliance of Doctor Eley and will reflect his energy, interest, and broad knowledge of academic and clinical Pediatrics.

The moderator of today's program is Dr. David Rutstein, Ridley Watts Professor of Medicine and Preventive Medicine at Harvard Medical School. He is an international authority on the problems of epidemiology of disease, infectious disease, and preventive medicine. May I introduce to you, Doctor David Rutstein.



II. Introductory Remarks

Ninth Annual Maurice N. Kay Symposium November 8, 1972

By Leo Stern, M.D.

I should like to welcome you all to this, the Ninth Annual Maurice N. Kay Symposium, whose subject this year is "Drug Metabolism and Therapy in Infancy and Childhood (Perspectives in Pediatric Pharmacology)".

As many of you know, Doctor Kay was Chief of Pediatrics at the Roger Williams Hospital from 1951 to his untimely death at the age of 53 in 1962. A physician's image in the eyes of his peers and colleagues is best judged by what he leaves behind him. The fact that these symposia established by Doctor Kay continue to exist in his name is eloquent testimony to the esteem and place of endearment he held in the eyes of both his colleagues and those fortunate enough to have been his students.

Doctor Kay was succeeded in 1963 by Richard Cannon Eley, who came from his position as Clinical Professor of Pediatrics at Harvard to assume the directorship of Pediatrics at this hospital and the post of Professor of Pediatrics at Brown University, and remained at its helm until his death in April of 1971. This, the Ninth Maurice N. Kay Symposium, has been arranged in part to honor his

contribution to Pediatrics and the care of children as well. It is of interest that Doctors Kay and Eley were friends, a friendship which no doubt benefited both themselves and the institution they both served so well.

Doctor R. Cannon Eley is a name known internationally in pediatric circles, yet neither his curriculum vitae nor his lengthy list of publications and society memberships nor his association with one of the early pediatric textbooks comes close to the tribute paid to him by Doctor Joseph Garland in an editorial shortly following his death, written in *THE NEW ENGLAND JOURNAL OF MEDICINE*:¹

It is not the honors that physicians receive that measure their success, but their ability and desire to serve; their dedication to their profession, their simple acts of kindness and compassion that bring them the affection as well as the esteem of their fellows. Cannon Eley was one of these.

I would guess that this description applies as well to Doctor Kay, and it is with this background of both that we now turn to the business at hand — that of our symposium on the treatment of children.

Like the rest of our society, medicine has undergone many changes in the last century. Classical medicine as practiced in the days of Sir William
(Concluded on page 300)

LEO STERN, M.D., *Director, Department of Newborn Medicine, Montreal Children's Hospital; Associate Professor of Pediatrics, McGill University, Montreal.*

Environmental Influences Upon Time Of Arrival At Puberty

Methodology Of Measurements Is Described And Some General Aspects Of Puberty Are Considered

By H. Boutourline Young, M.D., F.R.C.P.

Puberty may be defined as the process of physical sexual maturation. It may be differentiated from adolescence, which includes the process of emotional development and adjustment.

Puberty may be quantified, and one of the best measures is the date of menarche in the female. There is good evidence that in western societies the age of onset has been decreasing at the rate of 3-4 months every decade for the past 100 years¹ (Fig. 1); girls now reach puberty 2½ years earlier than 100 years ago. There is some evidence that where socio-economic circumstances have reached a high level and have remained constant between generations further decrease in age at puberty is not occurring.² In one of our smaller studies⁷ it appeared that in families which were socially upwardly mobile the daughter reached menarche substantially below the age at which the mother attained it, whereas in socially static families the ages of menarche of both mother and daughter were much the same.

H. BOUTOURLINE YOUNG, M.D., F.R.C.P.,
Yale University School of Medicine, New Haven, Connecticut.

Read at the Eighth Maurice N. Kay Pediatric Symposium, Roger Williams General Hospital, Providence, R. I. October 6, 1971.

This provides some support for the nutrition-hygiene hypothesis which supposedly carries individuals close to their genetic potential as the general conditions of life improve. However, there is little evidence that these same environmental circumstances may influence intellectual or emotional development, and thus we have a situation where there may be advanced sexual maturity without either the mental capacity or the emotional maturity necessary to deal with the burgeoning desires and physical turmoil which accompany sexual maturation.

On the average, girls reach puberty about two years ahead of boys. In boys there is a more difficult quantitative problem in measurement. Ideally, the first ejaculation should be a good point of reference, but this is often difficult to establish. Thus associated signs must be used, even in girls, as memory may sometimes be untrustworthy.

There appears to be an influence of major illnesses upon time of arrival at puberty but this does not appear to have been quantified.

Trace metals, and in particular zinc, appear to exert a considerable effect upon growth and time of arrival at puberty.

Despite the evidence for a considerable environ-

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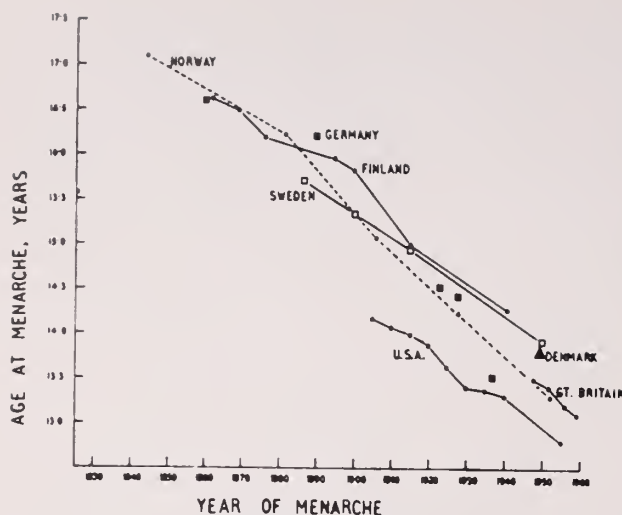


Figure 1
Secular trend in age at menarche 1830-1960

mental effect, genetic factors, as shown by twin studies,¹ seem preponderant.

METHODS FOR ASSESSING THE DEVELOPMENT OF YOUNG PEOPLE DURING PUBERTY AND ADOLESCENCE

After the age of 10 years in girls, and 12 years in boys, there will frequently be evidence of sexual development. As indicated, girls come to puberty about two years ahead of boys, but there is a wide standard deviation, so that there is some overlap such that an early maturing boy may be more precocious than a late maturing girl of the same chronological age. As stated, both girls and boys have been reaching puberty progressively earlier over the past century, and in a number of recent studies the mean age of menarche in girls was found to be well under 13 years.³⁻⁸ Our own studies gave a mean of 12 years 3 months in well-nourished Florentine girls.⁷

At puberty there is the well-known growth spurt in boys. The growth spurt in height is somewhat more intense and longer, accounting in part for the adult sex differences. The remaining difference is mainly accounted for by the extra two years of growth which boys have experienced before the self-limiting adolescent spurt begins. However, at all ages, adolescence included, the growth of girls seems less affected by stress such as illness or poor nutrition.⁹⁻¹²

PHYSICAL MATURATION IN GIRLS

Breast: The first evidence of sexual maturation in girls is usually the appearance of a breast bud. There is elevation of the papilla, enlargement

of the areola, and evident swelling of breast tissue. Reynolds and Wines¹³ have described breast development stages, and their classification has been widely accepted. The following stages are described:

Stage 1—Pre-adolescent, confined to elevation confined to elevation of papilla.

Stage 2—Breast bud, elevation of breast and papilla, and increased areola.

Stage 3—Progressive enlargement of and protuberance of breast and areola.

Stage 4—Protuberance of areola and papilla above breast, occurring in something more than one-half of all subjects.

Stage 5—Maturation: further increase in breast tissue, projection of papilla only, recession of areola.

The most recent breast standards are those of Tanner¹⁴ and it is urged that these be accepted, as they combine the best features of the previous classifications.

Pubic Hair: The first appearance of pigmented, crinkly pubic hair is usually several months after Reynolds and Wines' breast stage 2, but it *may* sometimes precede it. Pubic hair stages may be defined as follows:

- | | |
|----------------------|---|
| Child | 0. In a child, any hair on pubes is no different from that on the abdominal wall. |
| Immediate Prepuberal | 1. Growth on pubes of long, downy non- or only slightly pigmented hair. |
| Puberal Stages: | |
| Early | 2. Appearance of coarse, pigmented, crinkly pubic hair in small quantity. |
| Middle | 3. Coarse, pigmented, crinkly hair in moderate quantity. |
| Late | 4. Coarse, pigmented, crinkly hair in considerable quantity, with the female pattern of straight or concave upper level, followed by: |
| Adult | Completion to the adult form, including hair on the inner side of the thigh. |

Stage 1 may appear at any age from 8 to 14, and the process of development to Stage 4 takes up to three years.

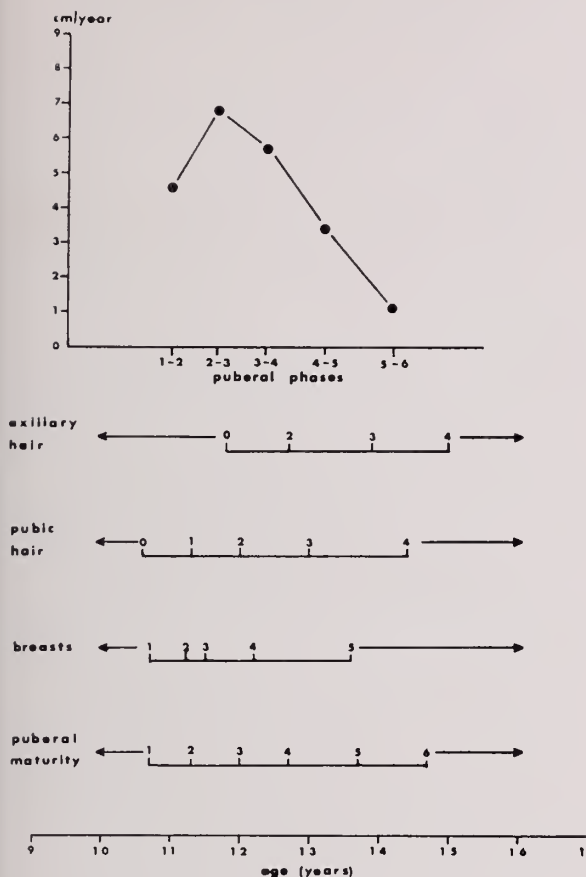


Figure 2

Some physical events of puberty in females

The sequence of some of the events at adolescence in girls is presented in Figure 2.

Axillary Hair*: Pigmented crinkly hair appears in the axilla, usually one to two years after its first appearance on the pubes, but occasionally one may find an exception where it may take precedence. With the appearance of a moderate amount of axillary hair, axillary sweating with typical odor may first appear.

It should be remembered that the amount of hair pigmentation may vary in different parts of the world; in Northern Europe, for example, pigmentation in some individuals may be barely discernable.

CLASSIFICATION OF SEXUAL MATURITY

It is generally recognized that it is useful to evaluate the degree of sexual maturity during adolescence, and for this a classification is neces-

*This follows the same 5 point classification from 0-4 as for pubic hair. However, Stage 1 is rarely seen.

Table 1

Classification	Sexual Maturity (girls)	Characteristics
1. No change from a child	No growth of pubertal hair, no growth spurt.	
2. Prepubertal phase	Downy pubic hair; usually first evidence of growth spurt; elevation breast papilla, perhaps early budding.	
3. First stage puberty	Pubic hair, pigmented, coarse and curly in small quantity; budding of breast, areola enlargement; marked growth spurt; enlargement of labia.	
4. Second stage puberty	Pubic hair as described above in moderate amount, filling out of breasts, sometimes projection of areola and papilla to form a secondary mound; axillary hair as described above in small quantity; menarche usual in this phase; growth spurt marked, but already falling away; further growth labia.	
5. Third stage puberty	Pubic hair further increased and approaching adult quantity and distribution; moderate quantity axillary hair; breasts approaching or reaching adult type configuration, with recession of areola to level of the breast; labia approaching or reaching adult type; annual growth less than before puberty; menstruation usually well established.	
6. Adult	Further growth axillary and perhaps pubic hair to adult type and distribution; breasts adult; labia adult; growth in height usually less than 1.5 cm in previous 12 months.	

sary. A suggested classification is presented in Table 1 (Boutourline Young, et al., 1963).

Physicians should make detailed notes on sexual maturity which in turn permits a classification from 1 to 6 (as shown in Table 1).

PHYSICAL MATURATION IN BOYS

Testicle: Growth is due largely to enlargement of the seminal tubules. The volume increases from the 1-2 cc level of the child to sometimes more than 20 cc. We have used a six point scale as follows:

Testicular volume: By comparison with wooden models shaped like an ellipsoid to resemble the human testis, or better, the plastic models

devised by Professor André Prader, and manufactured by Sandoz. (1 cc—25 cc).

Key to Old Wooden Models	Volume cc	Length cc	Diam- eter cc	
1	1.5	1.6	1.3	
2	3.0	2.1	1.6	
3	6.5	2.8	2.1	
4	10.5	3.2	2.5	Vol = 0.524 x
5	15.5	3.5	2.9	length x
6	21.5	4.0	3.2	diameter sq.

Pubic Hair: As for girls, there is in the immediate prepuberal period, some growth on the pubes of long, downy, non- or only slightly pigmented hair. The three stages of puberty are similar to those in girls, except for the increased tendency in the male for the pattern to assume triangular form at adult levels. We have used a five point scale as follows:

- 0—no visible hair
- 1—downy, usually unpigmented, fine, straight hair
- 2—pigmented, coarse, crinkled hair in small amount
- 3—pigmented, coarse, crinkled hair in moderate amount
- 4—pigmented, coarse, crinkled hair in considerable amount

Pubic Hair Configuration: 1—concave; 2—straight; 3—convex.

Axillary Hair: As in girls growth of axillary hair is usually evident one to two years after the growth of pubic hair. We have used a five-point scale as follows:

- 0—no visible hair
- 1—fine, straight hair in small amount (relatively rarely seen)
- 2—pigmented, coarse, curly or crinkled hair in small amount
- 3—pigmented, coarse, curly or crinkled hair in moderate amount
- 4—pigmented, coarse, curly or crinkled hair in considerable amount

The facial and body hair rated from 0-4, the head hair line the shape of the jaw, the quantity and quality of eyebrow hair (1-4), and the quality of the voice (1-3), may be used as ancillary indicators, but the principal elements in a classification of physical development are the hair in the pubic and axillary areas, and the volume of the testicles.

Overall puberal maturity in males may be classified in a six-point scale as follows:

- 1—as a child: testicular volume 1, generally no development of secondary characteristics.
- 2—prepuberal: testicular volume 2, pubic hair 1, axillary and body hair 0, slight increase in penile length and diameter, eyebrows, line of cheek.
- 3—puberty, 1st stage: testicular volume 3-4, pubic hair 2, no axillary hair, definite enlargement of penis, hair on face and body 1-2, other variables as in Figure 2, evident growth spurt.
- 4—puberty, 2nd stage: testicular volume 4, pubic hair 3, axillary hair 2, moderate enlargement of penis, other variables as in Figure 2, evident growth spurt.
- 5—puberty, 3rd stage: testicular volume 5, pubic hair 3-4, axillary hair 2-3, further enlargement of penis, other variables as in Figure 2, growth spurt tailing off rapidly; annual increment usually less than puberty.
- 6—adult form: testicular volume 6, voice adult, pubic hair 4, axillary hair 3-4, other variables as in Figure 2, not more than 1.5 cm growth in body height in previous 12 months.

It has been demonstrated¹⁵ that the following equation gives a quick and precise method for assessment of puberal maturity in boys:

$$0.5 \text{ (pubic hair rating)} + 0.4 \text{ (testicular volume rating)} + 0.3 \text{ (axillary hair rating)} + 0.5 \text{ (constant)} = \text{puberal age}$$

The physical events of puberty in boys are illustrated in Figure 3.

Peak height velocity corresponds approximately to stage 3 growth of pubic hair. Subsequent to this point is the spurt in sitting height and enlargement of the larynx with deepening of the voice.

The male breast also experiences changes. The areola increases in size and deepens in pigmentation and in about 30 per cent of boys there is a distinct swelling which may last more than a year. The swelling usually commences at mid-puberty.

Facial hair usually begins to grow when axillary hair appears.

As in girls, there has been a pronounced secular trend also in boys. The gain, in the 70 years prior to 1950, was 1.5 cm and 0.5 kg per decade for the prepuberal period, increasing to 2.5 cm and 2.0 kg per decade during adolescence and to 1.0 cm per decade for the adult. The velocity curves in height also became earlier by 3-4 months every 10 years.¹

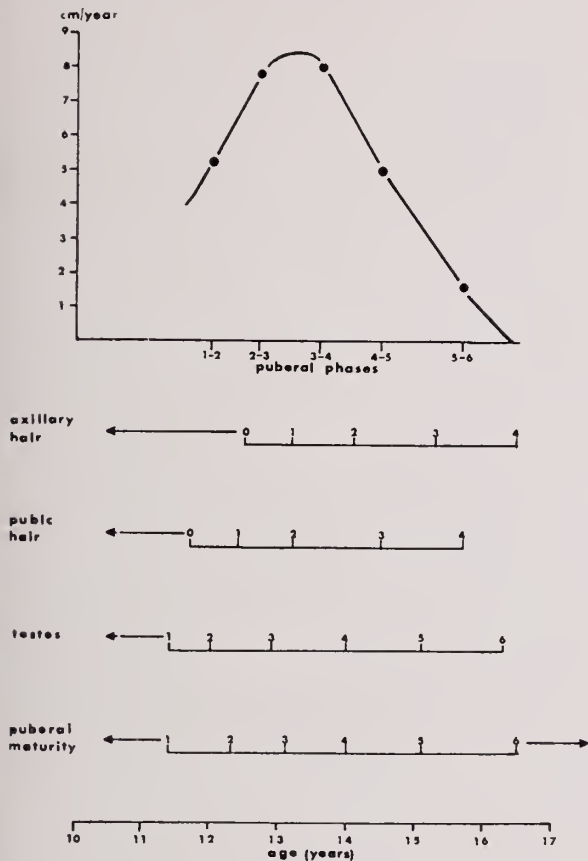


Figure 3
Some physical events of puberty in males

There is some evidence that the fall is less in the more privileged social classes.^{7, 2.}

BODY BUILD AND PHYSICAL MATURATION

Our own observations⁷ agree with those of others^{1, 16} that plumpness or endomorphy appears to be associated with earlier maturation. There is also some evidence¹ that lean spare subjects, scoring high on linearity, tend to arrive later at puberty, although in our limited series we could not confirm this. McNeill and Livson¹⁶ have demonstrated endomorphy as the major predictor of early maturation. Our own early maturers tended to be fatter throughout development and less linear as adults.

CHANGES IN BODY COMPOSITION

After the age of 8 the measured skin folds of girls increase until maturity. This is in contrast to boys, where there is a decrease in the width of skin folds on the limbs during adolescence. The situation is illustrated in Figures 4 and 5¹⁷, where skin folds in groups of males and females are plotted against both chronological age and phase

SKINFOLD TRICEPS

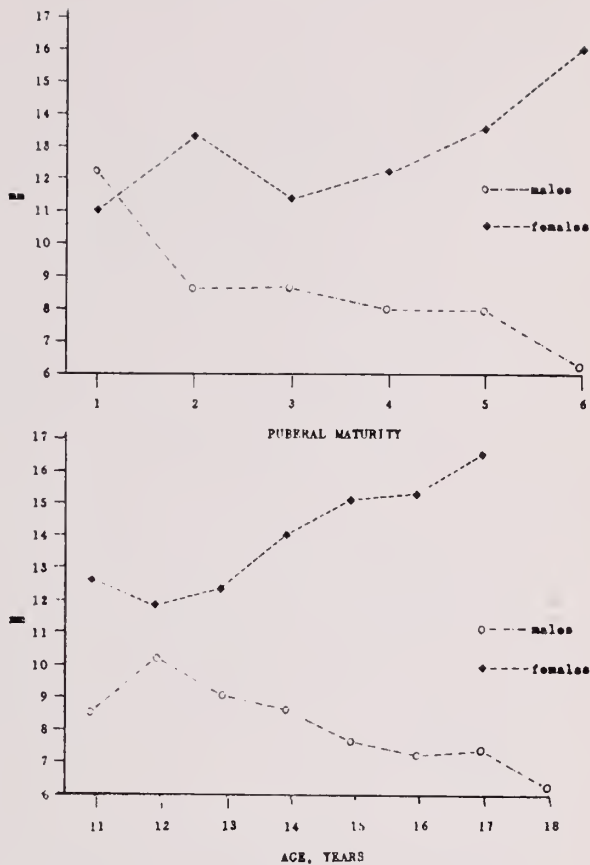


Figure 4
Skinfold triceps: comparison of puberal maturity and age in years

of maturity. Figure 5 shows the divergence between the sexes after early puberty in bone and muscle. After this point the relatively small sex differences in strength and coordination become much more marked.

It is now possible to predict fairly accurately at the age of 8 the adult height of a person, and such predictions are of potential value where height is attached to an occupation involving long training (e.g. ballerinas). Bayley's prediction tables¹⁸ involve consideration of actual height, actual age, and skeletal age. If practicable methods were available for slowing down height, the methods would be of considerable value in dealing with the problem of very tall girls.

ATTEMPTS TO SUPPRESS EXCESSIVE GROWTH IN GIRLS AND BOYS

Estrogens have been used for this purpose but Bayley, Gordan, Goldberg and Storment¹⁹ appear to have demonstrated that there is no significant

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BONE — MUSCLE

ARM (circ.)

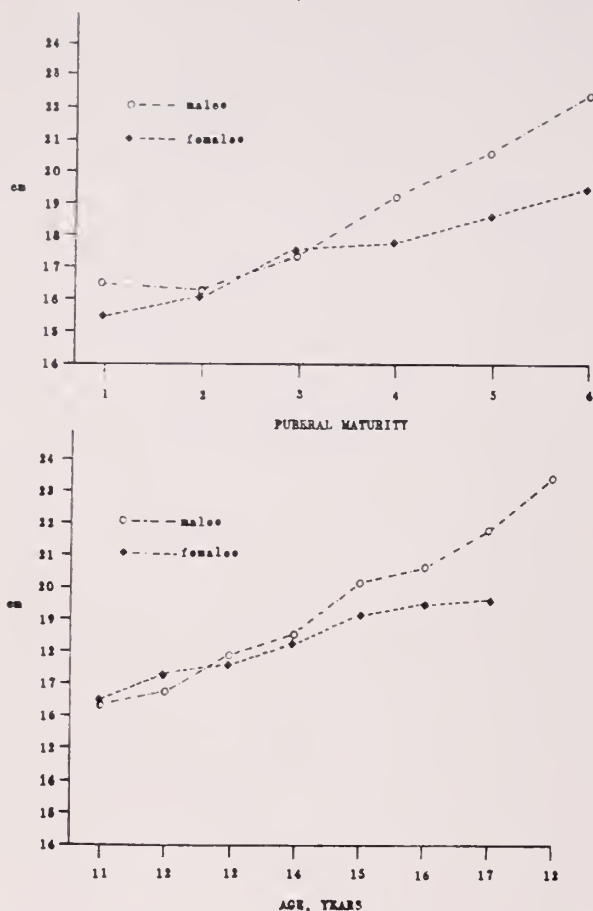


Figure 5

Bone — Muscle arm (circ.): comparison of puberal maturity and age in years

difference between mature height after treatment and that previously predicted. Estrogen treatment accelerated the rate of skeletal maturation; and, since there was no change in predicted height, the hormone must also have increased the rate of linear growth proportionately.

However, Prader²⁰ has just reported a significant shortening of final adult height over that predicted when large doses were used. Prader indicated that only two of the treated girls had yet become pregnant, and this gave him cause for concern.

Our own group²¹ reported upon the results of hormone treatment of boys ostensibly to increase their height. The result was the reverse of that expected as indicated in Table 2.

THE SECULAR CHANGE IN PUBERAL MATURITY

There is some evidence that in the more privileged social classes menarche is more likely to

occur early in the course of the development of secondary sexual characteristics. This is shown in Table 3.⁷

The accuracy of recorded age at menarche has been discussed by Livson and McNeill,²² who conclude that there may be expected an error of six months after an interval of 15-20 years. Evidence from a limited longitudinal study of Florentine girls supports this.⁷ Livson suggests that accuracy may be increased by improving questioning techniques.

Menarche comes later to girls in families where there are many children.²³⁻²⁵ This may be purely an economic effect, although the reasons are not yet entirely clear.

CLIMATE AND RACE AND MENARCHE

A review of the evidence suggests that climate has little effect upon growth or maturation.^{26, 27} Ellis²⁸ reports menarche in economically privileged Nigerian girls as 14.3. With regard to race there is some evidence²⁹ that there may be differences not accounted for by economic circumstances, but it is difficult to separate out the respective influences of race and body shape, already referred to as associated with time of arrival of menarche.

SEASONAL VARIATION

Both girls and boys grow more in height in the spring and more in weight in the autumn, but there are wide individual differences, some children and adolescents fluctuating very little with season and others not responding to the general pattern. Valsik²⁴ reports two peaks of increased incidence of menarche; one in July-September and the other, less marked, at mid-winter. He also reports a retarding effect of altitude upon menarche, but it is not clear if socioeconomic factors have been controlled.

MENSTRUAL SYMPTOMS, SOCIO-CULTURAL FACTORS AND AGE OF ARRIVAL AT MENARCHE

It has been hypothesized that socio-cultural factors may so affect attitudes as to lead to markedly differing prevalence of dysmenorrhea in different environments. Our own (published) observations have failed to support this, but instead show an increased prevalence of dysmenorrhea and poor attitudes towards menstruation in the precocious girls. At least in the two cultures of Italy and the United States, the late developers appear to accept menarche as a gift, while those who arrive early demonstrate a tendency to attach symptoms to the function. If this work is confirmed, it may

Table 2
Increments (cm) in growth in adolescents who received varying doses of hormone therapy and a comparison with those who did not receive such therapy.

Type of Group	Puberal Phases					Total height increments
	1-2	2-3	3-4	4-5	5-6	
Normal without therapy	5.2	7.6	8.0	5.0	1.7	27.5
Small quantity or recommended and did not follow treatment	4.9 (15)	7.5 (23)	8.2 (22)	4.3 (21)	0.6 (4)	25.5
Medium quantity 10-30 injections	5.0 (20)	6.5 (29)	7.4 (24)	5.0 (19)	1.2 (3)	25.1
Considerable quantity >30 injections	4.3 (12)	6.6 (16)	6.8 (14)	4.7 (8)	1.5 (6)	23.9

Between the four groups there was no significant difference in the chronological age at each puberal phase from one through six; nor were there significant differences in total body weight by chronological age in early puberty.

Table 3
Mean Ages at the Stages of Puberty and Mean Puberal Stage at Menarche

Social Class	2		3		4		5		6		Mean Point of Arrival at Menarche on Puberal Stage	
	Age	No.	Age	No.	Age	No.	Age	No.	Age	No.	Age	No.
1 & 2	11.48 (0.68)	8	12.15 (0.70)	23	12.77 (0.74)	27	13.65 (0.90)	20	14.766 (1.05)	9	3.71 (0.41)	32
3	11.72 (0.41)	13	12.43 (0.55)	22	12.74 (0.84)	31	13.65 (0.95)	27	15.10 (0.83)	17	3.85 (0.42)	35
4 & 5	11.67 (0.55)	4	12.48 (0.62)	6	12.53 (0.77)	11	13.49 (0.84)	13	14.62 (0.88)	10	3.92 (0.52)	13
Total	11.63	25	12.31	51	12.72	69	13.61	60	14.88	36	3.81	80

Figures in parenthesis are standard deviations.
 Taken from the same paper as Figure 2 with kind permission of the publishers.

(Continued on next page)

be helpful in indicating to school health educators where one of their investments should be.

AGE AT MENARCHE AND AGE AT MARRIAGE

Buck and Stavrakys³⁰ report a significant relationship in women less than 30 years old. This work needs to be confirmed in a sample not selected because of child bearing.

PHYSIOLOGICAL CHANGES

Shock^{31, 32} has shown that physiological changes such as in systolic blood pressure, oxygen consumption, and heart rate, are in relation to menarche and not chronological age. Soon after menarche the blood pressure reaches adult female levels; there is a fall over 3 years of basal metabolic rate to adult values and a steady decline in resting heart rate. In contrast to boys, there is no rise in the number of red blood corpuscles or in hemoglobin level. Shock has also demonstrated that from age 13 there is a sex difference in alveolar CO₂ tension, boys being higher than girls. There does not yet appear to be sufficient information as to when the menstrual cycle fluctuation in pCO₂ commences, a herald of much greater changes which occur during pregnancy;³³ during which alveolar pCO₂ may progressively fall from 38 mm to nearly 30 mm Hg.

Another difference in sex patterns is in respect of gastric acidity.³⁴ At puberty there is a much larger increase in boys in free HCl secreted in response to a test meal. The difference persists until after age 40. The mouth temperature of girls departs abruptly from the male trend at the time of puberty.⁴⁶ Presumably the fluctuations in temperature with the menstrual cycle commence with ovulation.

SKELETAL AGE

This important biological indicator is used widely in clinical investigations of growth disturbance and in epidemiological studies. Different standards have been created for boys and girls because girls are consistently more mature.³⁵⁻³⁷

GROWTH DISORDERS IN ADOLESCENT GIRLS

Patterns of growth and development depend a great deal on heredity, and a first step in the assessment of apparent linear growth deficiency is a careful family history with time of arrival at puberty of parents and siblings and including a prediction of the adolescents' height from the mid-parental height (Garn, Tanner). It is important to bear in mind that such prediction tables are based upon assumption of adequate environmental circumstances during growth for both generations. At the extremes of environmental pressure, mature

body height may be reduced by as much as 10 per cent.³⁸ Further investigation of apparent growth failure will include observation of growth increments and a medical examination which will give special attention to presence of congenital defects, chronic infection or the long-term results of previous infection, and nutritional disorders. An x-ray film of the hand and wrist and possibly other centers for skeletal age is part of this examination. Endocrine disorders such as hypothyroidism need to be excluded.

Exclusion of the above factors in the presence of marked retardation is an indication for referral to one of the special growth clinics, such as that conducted by Prof. J. M. Tanner at the Institute of Child Health of London University. Here it is possible to undertake further specialized investigations such as determination of 17-ketosteroids and follicle stimulating hormone, blood glucose response to insulin, and chromosome studies. In a very small proportion of cases patients may be identified as suitable for growth hormone treatment.

In Western Societies the majority of cases of growth failure will have been identified during childhood.

Growth of hair on the face and body may be a reason for seeking the advice of a gynecologist. Tanner¹ states that hair on the face has a relatively high threshold to adrenal androgens and is more influenced by testosterone. Women in the child bearing period with increased facial hair have a greater production of 17-ketosteroids and a more masculine body build.

COMMON DISORDERS IN ADOLESCENTS

Acne provokes much concern amongst adolescents. The prevalence rises from zero in the pre-puberal period to a peak of 30 per cent in American boys in the final phase of puberty.³⁹ Due basically to estrogen-androgen imbalance, it is more common in males than females. It usually continues for a year or two. The treatment of this has been discussed by Gallagher,⁴⁰ who also deals with other disorders, such as defects of posture and the common orthopedic disorders. Flat feet are frequently seen, but few of them are painful; these must be treated. Gallagher has found that self-inspection in the nude by means of a long mirror will encourage an adolescent to ask for measures which may improve her posture. Improved posture and exercises for the pectoral muscles may also improve the figure, a desire of many adolescent girls. It is also important to dis-

tinguish functional from structural scoliosis to bring important early treatment to the latter. Epiphysitis, spondylolisthesis, epiphysiolysis of the femoral capital epiphysis, osteochondritis, and related disorders are also discussed by Gallagher.

Fatigue is another common complaint to be dealt with by a thorough physical examination with special attention to possible anemia, after-effects of acute disease, such as mononucleosis or hepatitis, and habits such as going to bed late. With medical and hygienic causes excluded, many cases will be found to have psychological origins.

Obesity is also a common problem in girls. Height and weight tables should be interpreted with care as some mesomorphic girls may have excess weight due to muscle and bone. Fat may be satisfactorily measured by skin calipers.⁴¹ Obesity occurs when intake of calories systematically exceed body requirements. Appetite is regulated by a number of factors, and it is important to remember that excess eating may not only be a bad habit but also may protect against many stresses. Many fat girls exercise little, and motion picture studies of obese subjects at camps have confirmed habitual economy of movement in many of them. Before initiating treatment with diet and exercise, it is important to exclude metabolic defects, and we should remember that fatness occurs in some families and here there may be limits to what may be achieved by diet and exercise.

There is a striking incidence of myopia at adolescence⁴² and also an increase in the severity of existing myopia.⁴³ Regular vision testing is therefore particularly indicated at a different time of day. In the examination, the adolescent should be given every chance to talk in an informal atmosphere, and the results of the examination should be discussed with her so that a treatment partnership is built up.

PERSONALITY CHARACTERISTICS

Reports from Berkeley⁴⁴ have indicated that physically accelerated American adolescent boys tend to be more self-confident and independent and less rebellious towards parents than their slow-maturing peers. However, this cannot be generalized, as in Italy we found that early maturing boys do not have more positive self-concepts but do feel warm and affectionate towards their parents.⁴⁵

SUMMARY

This paper has attempted to describe various known environmental influences upon time of arrival at puberty. Attention has been given to meth-

odology without which puberty cannot be measured.

Various environmental influences are considered in detail.

Some more general aspects of puberal development are also considered.

ACKNOWLEDGEMENTS

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REFERENCES

- ¹Tanner JM: *Growth at Adolescence*, Second Edition. Oxford, Blackwell Scientific Publications, 1962
- ²McCammon RW: Are boys and girls maturing physically at earlier ages? *Amer J Public Health*, 55:103-6, Jan 65
- ³Simmons K, Greulich WW: Menarcheal age and the height, weight and skeletal age of girls age 7 to 17 years. *J Pediat* 22:518-48, May 43
- ⁴Nicolson AB, Hanley C: Indices of physiological maturity: derivation and interrelationships. *Child Develop* 24:3-38, Mar 53
- ⁵Kinsey AC, et al.: *Sexual Behavior in the Human Female*. Philadelphia, W. B. Saunders Company, 1953
- ⁶Thoma A: Age at menarche, acceleration and heritability. *Acta Biol Acad Sci Hung* 11:241-54, 60
- ⁷Boutourline Young H, Zoli A, Gallagher JR: Events of puberty in a group of 111 Florentine girls. *Amer J Dis Child* 106:568-77, Dec 63
- ⁸Zukowski W, Kmietowicz-Zukowska A, Gruska S: The age at menarche in Polish girls. *Hum Biol* 36:233-4, Sep 64
- ⁹Greulich WW: The growth and developmental status of Guamanian school children in 1947. *Am J Phys Anthropol* 9:55-70, Mar 51
- ¹⁰Greulich WW, Crismon CS, Turner ML: The physical growth and development of children who survived the atomic bombing of Hiroshima or Nagasaki. *J Pediat* 43:121-45, Aug 53
- ¹¹Hewitt D, Westropp CK, Acheson RM: Oxford Child Health Survey; effect of childish ailments on skeletal development. *Brit J Prev Social Med* 9:179-86, Oct 55
- ¹²Washburn TC, Medearis DN Jr, Childs B: Sex differences in susceptibility to infections. *Pediatrics* 37:57-65, Jan 65
- ¹³Reynolds EL, Wines JV: Individual differences in physical changes associated with adolescence in girls. *Amer J Dis Child* 75:329-50, Mar 48
- ¹⁴Tanner JM: In Gardner LI, et: *Endocrine and Genetic Diseases of Childhood*. Philadelphia, W. B. Saunders Company, 1969
- ¹⁵Boutourline Young H, et al.: Evaluation of physical (Concluded on page 299)

Problems Of Emerging Sexuality And Their Management

Nothing Author Studied in Medical School or in Residency Training Equipped Him For This Presentation

By John W. Grover, M.D.

You have been listening to very well studied and documented clinical papers about adolescence. For a change of pace I am going to move in a direction which to me is logical, but not as scientific; it is a more personal statement. I would first like to thank the organizers of the symposium for giving me the opportunity to be here, with particular respects to Mrs. Kay and Mrs. Eley. I cannot make any comments about Cannon Eley, except that I was one of the last medical students at Harvard while he was still there; I remember him only vaguely. I wish I had had more contact with him, since he was such a great person. I have had contact with David Rutstein since I was a medical student, and you intimidate me a little, David. I well remember how you taught us to analyze whether or not a paper says what it set out to say; I hope you don't try to do the same to my talk today!

I would like to say (and this is a criticism of medical education) that nothing I studied in medical school or in residency training equipped me for my presentation. This should change; I had to

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change myself in order to be able to experience and deal with the kinds of problems I will present to you. Some medical schools are in the process of changing, but I must say, to make my position clear, that change is long overdue. Since I did not learn about sexuality in medical school or in training, perhaps you should know something about who I am and how I became who I am, so that you may listen to me critically.

I am an obstetrician and gynecologist in private practice at the Massachusetts General Hospital and the Boston Hospital for Women. I have worked with young people, in and out of my practice, for five or more years dealing with problems of human sexuality. I have learned with them, helped to teach them as I learned and tried to study and gather from experience those things that to me seem to be helpful. I have sought to learn and teach what appeared to be needed by young people as they grow and develop.

I have been a vice-president of Planned Parenthood of Massachusetts, and advisor to the Pregnancy Counselling Service and to other childbirth education groups. I am currently a member of Governor Francis Sargent's Commission on the Status of Women in Massachusetts; so I feel somewhat tuned in to Women's Liberation. I have three daughters of my own; one is 12 and soon to be an adolescent, a 10 year old who almost as soon will

be joining her, and a six year old. I have just written a book on Venereal Disease* which is aimed at young people, and will be published later this month (my "plug" for the day).

I have thought a great deal about, and have a reasonable amount of direct experience with, young people, but I do not know all of their problems. My title might sound to you as if I have all of the answers, but again I do not. Nor do I have any special secrets about their management. But I would like to talk about sexual problems of adolescence as I perceive them, with some thoughts as to management.

Compounding my feelings is the knowledge that there is a broad spectrum of education, bias, and concern "out there", in this audience as well as out in the world. I recently attended a meeting where the following joke was being passed around (and heartedly laughed at). It concerns population control. "A woman had long been taking birth control pills for family planning. However, she gave them up when her husband bought a 'condominium'." That kind of humor turns us on, yet it shows fundamental ignorance about sexuality. It is one end of the spectrum with which we must deal. The opposite end is shown in my own family. Not long ago my wife, who is now "liberated" by having our youngest child in school, decided to take a part-time course at Regis College, not far from where we lived. It is a course in social work, and her homework included reading about divorce. Our six year old, in the first grade, said, "Mommy, why are you reading that book?" My wife said, "I am reading it because it is part of my assignment for school at Regis." Ava said, "But I thought you were reading *'Sex in Human Loving'*?" So here we have a six year old, aware of what is going on in our house, knows the books we are reading, and is sophisticated enough to ask pertinent questions! Well, I have a topic to talk about, so I will stop wandering. But I hope you now have some ideas of the depth and breadth of the problem.

EARLIER MATURING

There are some basic and factual matters which were mentioned by our other speakers that I should like to talk about in passing. One observation demonstrated by all three speakers is that children are maturing earlier. The reasons for this are not clear. The better nutrition and better states of health that Doctor H. Boutourline Young calls on to show

that young people are physically better able to express their genetic potential may explain it. However, of concern from my view is that, as maturation takes place earlier, male and female secondary sex characteristics appear earlier. In previous generations, if the female did not develop her secondary sex characteristics until she was 16, it was not likely that she would become sexually active until that time or later. In our present permissive society, if a child has the bodily features that allow for sexual activity, it is very likely that he or she will have some decisions to make about such activity as soon as that stature is attained, whether the youngster is 11 or 12, 16 or 17. Exposure to the possibility of sexual activity is concomitant with early maturation.

In addition to the *possibility* of sexual activity at an early age, sexual experimentation and activity *does begin* earlier and earlier. I do not mean just the peeking curiosity of the young child, or of the preadolescent, but genital heterosexual activity. It has already been mentioned to you that 11 and 12 year olds become pregnant and contract venereal diseases. Quite recently I took care of a 12 year old girl pregnant by her 13 year old boy friend, and another adolescent with V.D. It is clear that there are cultural variations; some of the papers by Lee Rainwater about a ghetto black population show that sexual activity may begin even before adolescence, and that seven or eight year old boys are pushed by their mothers into sexual activity. In terms of our population in general, sexual activity and sexual experimentation clearly is moving down further into younger age groups. I used to believe, when I was presented with a pregnant 12 year old, that it was likely that she had been abused by an older male, or was a victim of incest. However, this is no longer a valid view.. More and more young girls are pregnant because of sexual activity due to the sexual demands of themselves and their peers.

There are reasons, in addition to the early sexual maturation of children, for these occurrences. I relate them to the vast social and cultural changes that have taken place in our society in the last few decades. We know American Society has become rootless and mobile. Families are constantly moving. My suburban commuter town changes 30 per cent of its population every year. It was pointed out this morning that we are an urban population, with 60 per cent or more families with teenagers living in urban centers. Try and find a place to

(Continued on next page)

*VD—The ABC's, John W. Grover, with Dick Grace. Prentice-Hall, 1971

remember as home in an urban center! I recall going home to West Virginia last summer on vacation and thinking how nice it is to have a place to be from — to be able to identify the mountains and valleys and rivers and homes that were familiar to me as a child. How can one identify "home" with the northwest corner of the 32nd floor of a development? Such rootlessness and homelessness is dehumanizing and contributes to the behavior here discussed.

AFFLUENCE

The affluence of our society is another aspect I consider important. In spite of our problems with inflation, and in spite of unemployment and poverty, we have affluent and ambitious parents who are often absent, usually the father, but quite often the mother as well. Preoccupation with jobs and making money takes them away from their growing children.

There are still other factors: for instance, the decay or decline of the extended family and its influences on the socialization of young people; similarly, the general permissiveness of our society, where we have changed our external attitudes about what behavior we will accept, without caring about consequences. The Kitty Genovese case is one instance of our not caring what happens. A girl is killed right in front of our eyes, and we do not seem to care. In Boston a 12 year old child is raped, and we do not care. Permissiveness as well as the lack of caring greatly concern me.

Consider also the stimulation of children by the violence and titillation in the media of our commercial society. Much of what we see and hear on television and radio, and much of what we read in newspapers and magazines, is aimed to sell products. Advertising agencies have discovered that violence and sex attracts people's attention, and sells. Partially because of the media we are one of the most highly sexually stimulated societies in the world.

Yet there are components of this problem that we refuse to recognize, and continue to deny. Some aspects may be related to the technology of the times. How many years has it been since we have had television? Not very many. Yet there is a whole generation of young people that has grown up under its influence. There is a whole generation that spends 47 hours or more weekly in front of the television set, and may witness 14,000 violent deaths by the end of school. Thus it seems we have a different kind of youth developing. I call them the "media generation". They are really

"tuned in" to what they see and what they hear. Their music and their group activities show us this. There are clear differences in the growth and maturation of these young people contrasted with their parents, leading to separation, or a "generation gap".

PEER GROUP PRESSURES

Especially powerful young peer groups have developed, with pressures on children to conform or to behave in certain ways. Certainly, we were subjected to peer group pressures when we were growing up, but young people now have those pressures to a greater degree. When we combine the young culture as it has developed, the media with their titillation, the permissiveness of society, the lack of effective guidance, and the inability of parents to communicate, then what you see is what you see. I will come back again to what it is that I see.

Lack of guidance lies not only with parents but with schools, with social and religious institutions, and indeed with the medical schools and physicians. There is a question I like to ask when I am talking to professional groups, particularly pediatricians and obstetricians. How many of you are involved in providing sex education for your patients? (A few hands were raised.) I counted fewer than 50 per cent of hands recently when I asked this of gynecologists attending a postgraduate course. I spoke to the New England Pediatric Society, asked the same question, and similarly elicited less than a 50 per cent show of hands. These are the two groups of professionals that should have the most concern for sex education. Yet they showed me that not everyone is as concerned as I am. I believe pediatricians should assuage the sex knowledge and awareness of their patients, and of their patients' parents. I deliver the mother and hand you the baby; 12 or 16 years later I get her back pregnant! This is one kind of exchange of patients that I am opposed to. If you can continue the educational process when I give you the baby, and help provide information that is now available for parents, perhaps we can foster healthier and happier families.

I have written in my notes that I should raise the question of whether these forces that influence young behavior can be changed or altered for the better and, indeed, whether they should be. Some of my colleagues in Boston may dispute me, saying that such conditions have always existed; there always has been a generation gap, there have always been pregnant girls, so why even try for change? My rebuttal is that we live in different

times. We have the mass media, which do such a good job in influencing behavior in a negative way. It would be far better if we could use the media positively, by disseminating and using knowledge we already have. We do in fact have more knowledge. Beginning with Freud, coming down to Kinsey, to Masters and Johnson, and to others and spreading in ever wider circles. We have learned much about sexuality, human sexual behavior, and reproductive behavior and psychology that we can and must pass on healthily to succeeding generations. I personally believe, as you can see, that we can and ought to change some of these factors which influence behavior.

We have talked about some of the things that are happening biologically, and behaviorally. Now I would like to consider some of the problems our young people get into, at least a few of them. I won't discuss sex identity problems which may come about through early maturation. Perhaps some girls who mature early physically are not quite mature emotionally and cannot as readily accept their bodily changes; there then may be dysmenorrhea, sexual maladjustment, or pregnancy. The girls who mature later may have grown more emotionally as well and thus may be better able to cope with the problem. These factors are so variable, however, that it is hard to study them.

TEENAGE PREGNANCIES

A previous speaker pointed out that adolescent girls who are pregnant before the age of 14 have a 30 per cent incidence of underweight babies. Between the ages of 14 and 16, there is only a 13 per cent incidence of underweight babies. I should like to examine those figures very carefully. We know that when the adolescent becomes pregnant she does not tell anyone and thus does not have good prenatal care. When a woman does not have good prenatal care, she is more likely to have an underweight baby. So maybe it is not just the age, but poor prenatal care that influences the outcome of the pregnancy.

There is no question, statistically, that there now are more pregnancies in teenagers. I am disturbed that we do not have more accurate figures, because events are certainly in state of flux. The changes in abortion around the country must be altered some of these statistics rapidly and radically; yet we can not be sure what increasing legal abortion will do. The last year for which I have out-of-wedlock pregnancy rates in 1968. They compare well with the figures you were shown for 1967. At

that time about 9 per cent of live births were out of wedlock. When we examine who it is that becomes pregnant and delivers a baby out of wedlock, we see that at least half of these women are 25 and under. As we go down the scale, at 15 years and under there were 15,000 pregnancies, and at 14 years and under 8,000 pregnancies. But what is happening now, in 1971, may be quite different, and we can't find it out yet.

The outcome of illegitimate pregnancy can go in directions other than unwed delivery; abortion and marriage are other choices. Abortion has always been a problem; it is not just a new result of liberalized abortion laws. The fact is that even in the United States today, the vast proportion of abortions still may be carried out illegally. We estimate one million induced abortions a year in this country. It is likely that the abortion behavior of the U.S.A. is like that in other countries. There are countries where there are accurate abortion statistics, because abortion is legal and available on request. Induced abortion is practiced around the world, and it varies from 20 to 50 per cent of the pregnancy rate. These statistics come from countries such as Japan, Hungary, and Czechoslovakia. We also have newer statistics in this country regarding abortion, now emerging because of the changed laws in New York, California, Hawaii, Alaska, and, surprisingly, in Massachusetts. For example, in Massachusetts there are about 90,000 live births a year. Approximately 5,000 legal abortions yearly are now performed in the state. I know one agency, the Pregnancy Counselling Service, which sends 8,000 or 9,000 women out of Massachusetts to New York to be aborted. I can thus document fairly accurately about 13,000 or 14,000 abortions done on Massachusetts women per year!

More of those women aborted are single than married (70 per cent), and about one-half of the single girls are under the age of 20.

Teenage pregnancies can lead to the third direction as well: marriage. It was mentioned that one marriage in five country-wide begins with the bride already pregnant. Unfortunately, I cannot recall in how many of those marriages the girl was under 20. But a large proportion of them are, and that certainly is a risky way to begin marriage. That a high percentage of pregnant teenagers who marry soon get divorced is a well known observation.

VENEREAL DISEASE

Venereal disease was also mentioned this morning
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ing. The endemic situation cited in Baltimore is amplified the country 'round. In fact last year the Public Health Service declared V.D. pandemic across the entire United States. What does pandemic mean? Well, it means that the Baltimore situation is not unique. There are high schools in California where one student out of five will have gonorrhea in the course of the given year. I am told that the incidence of gonorrhea at one Massachusetts high school has increased 300 per cent since 1970. There will be somewhere between one-and-one-half and two million cases of Venereal diseases, including gonorrhea and syphilis, in the United States this year. About 500,000 cases will be teenagers. We know that V.D. is greatly under-reported by physicians. It is estimated that only one-eighth to one-tenth of all patients with V.D. are reported, and this leads to poor treatment of contacts and persistence of the reservoir of untreated infectious cases.

Venereal disease is a serious social and medical problem. It is expensive to treat and may permanently damage or sterilize both males and females. Syphilis and gonorrhea can affect unborn and newly born children, causing stillbirth, blindness, or major congenital abnormalities. Syphilis fortunately is not as common as gonorrhea, making up about 5 per cent of V.D. cases. Perhaps this is due to the continued penicillin sensitivity of the spirochete that causes syphilis. It may be that physicians are treating syphilis when they give patients broad-spectrum antibiotics for their "cold" or their "flu". But unfortunately this no longer treats gonorrhea, since resistant gonococcal strains have emerged. The treatment and control of gonorrhea requires a good bit more sophistication and study, and a lot more financial backing to become significantly effective.

There are still other conditions which affect young people because of their sexual activity; they include monilial and trichomonas vaginitis, crab lice, herpes ulcers, and venereal warts. All of these can be confused with venereal disease, thus further compounding the issue. There remains yet another problem area which, to me, seems even more important. Basically I feel that unwanted pregnancies are preventable and that V.D. can be prevented or treated if we are smart enough. The after effect of early sexual activity in young people which concerns me more is the *development of inappropriate expectations for sexuality, marriage, and the family.*

In our society there are many different ways in which people attempt to live together and relate

to one another, because they are unhappy with the way things are. Many of us believe that the family is in trouble, and that no one has an easy solution. Yet, for most of us the family is where we live and relate to each other. For most of our children, the individual family is still where they will be raised and nurtured. But if one enters marriage and family with inappropriate expectations, the task of adjustment can be difficult indeed. I sometimes state as a platitude that the portals of venereal disease, pregnancy, and abortion are difficult ones through which to enter the state of matrimony. I do not think chaos is a good way to prepare young people for living together in families; yet "chaotic" describes much of what they now experience.

It is appropriate for us as professionals in every field to foster ideas and patterns or examples of behavior which strengthen the family, and which increase each individual's capacity to understand and to make responsible decisions. We come back again to what others have mentioned: learning to be responsible about sexuality is an important part of growth and development for young people. The capacity to make informed and responsible decisions is a sure sign of a healthy and developing maturity.

It is very easy to be discouraged about what's happening. At one recent conference on venereal disease a statistician calculated that in another 15 years, based on current trends, we would all have gonorrhea! I do not believe the situation is as bad as that. I think there is some hope for change. And what do I see that is hopeful? I see that all of us can be better informed about sexual development and behavior, and about reproduction. We can know more about disease. There is more factual material available. This is not the 19th century, this is the 20th century. We have the great and fantastic background of Freud and his colleagues, of Kinsey, and of Masters and Johnson. Now we have even the public becoming aware of these findings through the writings of David Ruben, and "J", and "K", and "XYZ". These lay writings are important. People often ask me, "What do you think of the 'Sensuous Man' and the 'Sensuous Woman'?" Well, in some ways I believe these books are useful, because they bring to the general public the idea that we can think and talk and write about human sexuality. The books have individual biases, to be sure. But it is far better to have some information, to give us language with which to talk, and to give us concepts we can

handle, than it is to remain quiet and allow our offspring to blunder their way into mature living.

SOPHISTICATION OF YOUTH

We have to recognize that, in our society now, the average young person is more sophisticated than we realize. However, the generation that controls things is the really "hung up" generation. It is difficult for us who are in our 40s or older, the people who control the media and the teaching institutions, to let go and say that maybe some of the attitudes of young people are right. How hard for us to recognize that our children ought to be able to make some of their decisions themselves, and that we should give them some honest information to help them make appropriate decisions.

I would like to point out some of the things I have personally experienced which assure me of the truth of what I say. I began making television appearances about five years ago, by participating in a panel discussion about human sexuality. I was terribly inhibited myself, and so was everybody else. Fortunately it was at a late hour and practically no one saw it. Since then, the broadcasting media have begun to loosen up and we have seen productions such as the one on the beginnings of life, a very important production. A year ago we in Boston did an exceedingly frank and open television panel about venereal disease, and just last week there was a week-long morning series with Doctor Eleanor Hamilton of New York City in which we discussed sexual problems. We were allowed to be perfectly frank, with the single restriction that we could not use "four letter words", but we could talk about concepts. I drew an on-screen picture of the vulva. A year earlier I had drawn a picture of the penis and the uterus, and I believe these pictures on television to be New England firsts! It shows that things are opening up, and that the media are coming of age. It may be that the mass media themselves can be instrumental in change.

Concepts of sex education and education for family living are becoming more widespread and accepted than we know. It is unfortunate that as we become aware of sexuality, the conservatives among us begin to worry; we get hung-up and think that "things" are going to happen. We are concerned about who is going to teach our child. But stangely, we do not worry about movies or television, or what goes on in the streets or on the school bus. My children have discovered that the school bus is very sex-educational! Education for family living clearly

is progressing. The American Association of Sex Educators and Counsellors provides summer workshops and teaching experience for people who are to become sex educators.

If one is not comfortable with sexual matters, he probably would not be an effective sex educator. A teacher should not force himself to become involved because somebody says he ought to be doing it. I must point out that, when I began teaching, I was not comfortable discussing sexuality. I had heart palpitations and anxiety attacks when I began to talk to patients about sex. But one gets over that and learns. It is possible to change and become an effective sex educator, as I myself did, and teachers report the same.

NEWER EDUCATIONAL TECHNIQUES

Newer educational techniques and materials are available. Thank God we now have access to media that are responsibly made. You have no idea how much of your children's sex education comes from pornography and from X-rated movies. We have deprived them of their legitimate sex education because we cannot cope with it in our families, and so they must get it elsewhere. I conduct a continuing course on human sexuality for young people in Weston. Last year after seeing pornography and nude girlie shows in San Francisco, I discussed the experience with my class. I asked for a show of hands from this group of 25 high school kids if they had seen a stag film. One third of them had, two of them volunteered that they had been projectionists! Later, I asked for a similar show of hands of obstetricians and gynecologists at a post-graduate course, and fewer than 50 per cent of them had seen a stag film! How's that for a generation gap?

The sophistication and knowledge of young people today is staggering. I have several stories I would like to tell that measure their sophistication. One story involves my own daughters and myself. I have recently lost a great deal of weight; one morning my six-year-old said, "Gee Daddy, are you going to lose any weight from your penis?" I kept my cool, because this is what one does in such a situation and said that I did not think that I would lose any weight from my penis, that I am going to lose weight from the rest of my body and not from there. My nine-year-old, listening nearby, said "Wonderful!" The second story involves a television movie I viewed last night. The story takes place in the United States in 1994. A family is allowed to have only one child, and if they have

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Drug Disposition In The Fetus And Newborn Infant

Newborn Clearly Differs from the Older Child in the Handling of Drugs

By Sumner J. Yaffe, M.D.

The developing fetus and newborn infant are thought to be more susceptible to the action of drugs and chemical agents than is the adult organism. This concept has arisen from clinical experience and empirical observations in which drug administration to either the pregnant woman (and indirectly to the fetus) or to the newborn infant has been associated with unexpected adverse and, at times, fatal reactions. These have generated widespread publicity which has only served to perpetuate the belief that the newborn infant is unable to handle therapeutically administered agents. Several recent review articles^{1,2} have surveyed the current state of knowledge in this area and have emphasized the paucity of information in man. This lack of data prompted us to initiate detailed investigations of drug disposition in the human fetus and immature infant. This includes the process of drug absorption, distribution, metabolism and excretion which are major factors determining the duration and intensity of drug action. The following studies have been carried out in our laboratories over the past several years. They represent a very brief look at several representative pharma-

cokinetic processes in the young infant. Although they are described separately for the sake of clarity in presentation, all processes operate together and concurrently *in vivo* and must be considered as such in prescribing drugs to the newborn infant.

ABSORPTION

The absorption and excretion of riboflavin, a vitamin which is absorbed in adults by a saturable transport process in the proximal small intestine, was investigated in healthy, five day old, full-term infants.³ A single oral dose of riboflavin as the phosphate salt (150 mg/sq meter of body surface) dissolved in 10 ml of water was given to the infants mixed with milk formula (Enfalac®). Urine was collected by means of metabolic pan for a total of 36 hours after vitamin administration. Total riboflavin concentrations in urine and serum were determined by fluorometric methods described previously.⁴

The time course of urinary excretion of riboflavin in the newborn infants is strikingly different than that found in older infants, children, and adults (Fig. 1). While the maximum urinary excretion rate in the older subject is much higher (five fold) than in the neonate, the duration of the maximum rate is much longer in the newborn. Consequently, the total amount of riboflavin excreted in the urine is quite similar when expressed as the percentage of the administered dose. Thus, the two neonates to whom oral riboflavin was administered excreted 6 and 7.5 per cent of the dose,

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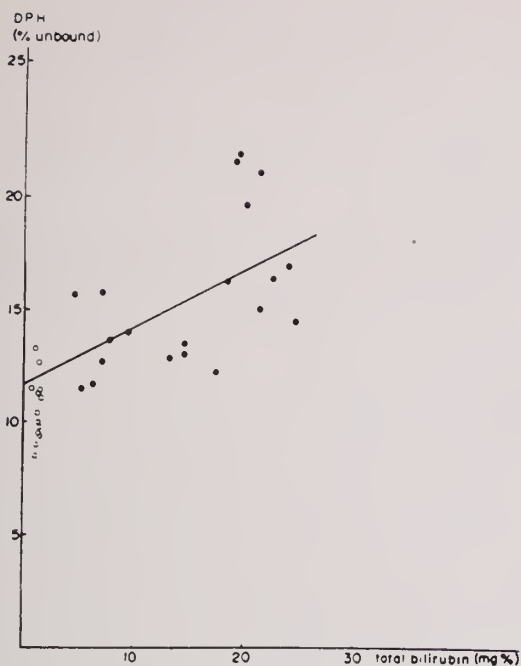


Figure 1—Urinary excretion rate/dose (ug/minute/mg) of riboflavin as a function of time after oral administration.
5 day old infant and 0 a 10-month-old infant.
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while three to six month old infants excrete 6 to 8 per cent. To determine if the slow and prolonged excretion of riboflavin in the neonates is due to a limited renal excretory capacity, riboflavin was administered parenterally to two additional infants. The dose was 17 mg/sq meter of body surface. The maximum excretion rate of riboflavin as a function of time after intramuscular injection of the vitamin was similar in the newborn and in the older subject. The maximum excretion rate was about seven times higher than that noted after oral administration of the vitamin. Therefore, it can be concluded that the slow and prolonged excretion of riboflavin by the newborn infant after oral administration is due to prolonged absorption from the gastrointestinal tract rather than to a limited renal excretory capacity.

Furthermore, since the intramuscularly administered riboflavin was almost quantitatively recovered in the urine of the neonates (92 and 93 per cent), the urinary recovery of the vitamin after oral administration can serve as an index of the extent of absorption of riboflavin. An estimate of renal clearance was obtained from the serum concentration and urinary excretion data following intramuscular injection. These values range from 60 to 78 ml/minute/1.73 sq meter and are some-

what higher than the normal glomerular filtration rate found in the newborn using inulin. It would appear, therefore, that renal tubular secretion of riboflavin which has been demonstrated in the older subject is already operative to some degree in the neonate. The maximum rate of excretion (8.65 meg/minute/sq meter) after an oral saturation dose of the vitamin was only one-fifth of the maximum rate observed in older subjects (40.7 ± 11.7 meg/minute/sq meter independent of age in the range of 0.25 to 40 years). This may be due to a much lower activity of the specialized intestinal transport process for riboflavin in the newborn.

In addition, one must also consider that capacity of this process in the neonate might actually be negligible and that the slow absorption may be due almost entirely to passive diffusion which occurs over a much longer segment of the gastrointestinal tract. Since riboflavin was administered as the phosphate salt, there is a possibility also that the phosphatase mediated conversion to riboflavin in the intestine is rare limiting in the neonate and delays the absorption. Regardless of the reasons for the slow absorption of riboflavin, the total amount absorbed from an oral saturation dose is similar to that absorbed by older infants when expressed as a percentage of the dose administered. This is true because absorption in the neonate proceeds for more than 16 hours; whereas in the older infant and adult it only lasts three to four hours. These results obtained with riboflavin serve to emphasize the differences which may exist for drug absorption between the newborn infant and the adult. Very few investigations have been published in which this parameter has been specifically examined. An early report in the literature showed that the absorption of a triple sulfonamide preparation was much slower in premature infants than in the full-term infant.⁵ On the other hand, a high speed of absorption was noted with sulfisoxazole in infants aged five days.⁶ Similar conclusions have been found for antibiotics (chloramphenicol, erythromycin, and tetracyclines). Very little specific information exists regarding interactions among several drugs and the rate of absorption of either in this age group.

The parenteral route is also used frequently to administer drugs, particularly in the neonate when drugs are often prescribed because of overwhelming illness. The results with riboflavin demonstrate that this substance is absorbed as well in the new-

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born as in the older patient following parenteral administration. Studies in animals have shown that there was no difference in the absorption of morphine following subcutaneous injection in young and adult rats.⁷ Comparative studies of absorption following different routes of administration have shown no difference in the absorption of digoxin between adults and infants for both the oral and intramuscular routes.⁸ Labeled digoxin could be detected in blood five minutes after oral administration, reaching a peak concentration in one to three hours. Following intramuscular injection the drug was detected in the circulation at one minute and peak levels were achieved 15 to 20 minutes later.

DISTRIBUTION

The next parameter which I should like to examine (albeit briefly because of the small amount of time allotted) is that of distribution. Through this process the drug which has entered the circulatory system is delivered to tissues of appropriate body compartments producing an effect when the necessary concentration at the receptor site is reached. The volume of distribution is regulated by several factors, including rate of transport across biologic membranes and extent of binding to protein. The newborn infant has a much higher extracellular volume than the adult. Total body water also is much greater in the newborn and varies from 86 per cent of body weight in the small premature infant to 70 per cent in the full-term infant. Fat content, on the other hand, is lower in the premature infant (1 per cent) than in the normal full term infant (16 per cent). With these changes in body composition, changes in drug distribution are to be expected. Yet few quantitative data are available regarding this phenomenon.

We investigated the plasma protein binding of diphenylhydantoin (DPH) in heparinized plasma from normal and hyperbilirubinemic newborn infants by means of an ultrafiltration technique utilizing carbon 14-labeled DPH. Fresh cord blood (mixed arterial and venous) was obtained from the maternal end of the cord immediately after birth before the placenta was delivered. Plasma from hyperbilirubinemic infants was obtained as the first sample from the umbilical vein when exchange transfusion was undertaken as part of therapy. Plasma samples were incubated for 30 minutes with labeled and unlabeled DPH in an approximate ratio of 1:4. Prolongation of the incubation up to one hour did not affect the results. The final concentration of DPH was 16 meg/ml, which is very close to the therapeutic concentration desired

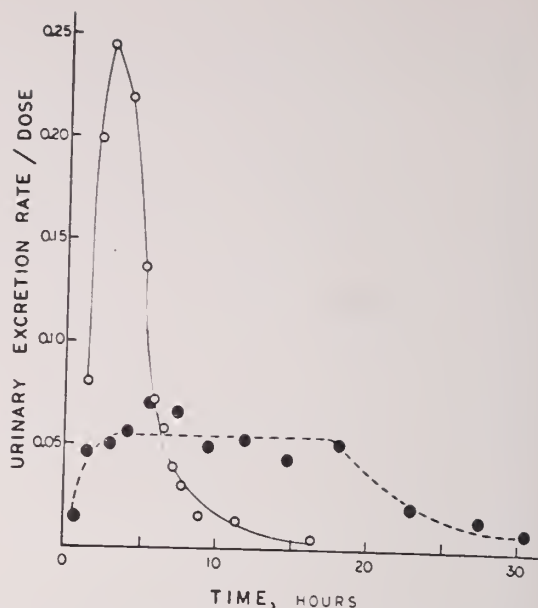


Figure 2—Percentage of unbound diphenylhydantoin plotted against the concentration of total bilirubin (milligrams per 100 ml) in plasma from 20 infants with hyperbilirubinemia (O). Percentages of unbound diphenylhydantoin in cord plasmas from 13 normal infants (●) are also shown.

for the management of convulsive disorders. The unbound fraction of DPH measured in cord plasma from 13 normal infants was 10.6 ± 1.4 per cent. The corresponding value in adult plasma is 7.4 ± 7 per cent.

The range of values in individual samples was much greater in the newborn plasma than in adult plasma. There is no difference in DPH binding capacity between cord plasma and plasma obtained by venipuncture from two newborn infants. Binding of DPH was also investigated in 20 hyperbilirubinemic infants where the concentration of total bilirubin (mainly unconjugated) varied from 4.5 to 24.5/100 ml of serum. There was a definite correlation between the size of the unbound fraction of DPH and the total concentration of bilirubin (Fig. 2). At concentrations of bilirubin greater than 20 mg/100 ml, the unbound fraction of DPH was twice as high as in plasma from non-hyperbilirubinemic infants. The correlation becomes even greater when the bilirubin/albumin ratio was plotted against the percentage of unbound DPH. This strengthens the hypothesis that DPH and bilirubin may compete for the same sites on the albumin molecule. While the lower degree of binding of DPH in cord plasma and in plasma from newborn infants may not appear to be striking when one considers percentage of the drug bound, it is of great significance when expressed

as percentage unbound, since this is the fraction which reaches the receptor. In other words, there is up to twice as much unbound drug in cord plasma than in adult plasma.

When hyperbilirubinemia is present, the unbound fraction of DPH is up to three times greater than in adult plasma. It is reasonable to expect that similar differences in plasma protein binding by adults and newborn infants may be found with other drugs. It is possible that this difference in binding is one of the many reasons why drugs have been reported to have greater effects and more often cause side effects in neonates than in adults when a dose is calculated on the basis of body weight or body surface. The difference in binding may be due not only to lower concentrations of plasma proteins (particularly albumin) but there may be also qualitative differences in the binding proteins. In addition, endogenous substances during the first few days of life, especially hormones transferred in utero may occupy binding sites and thus reduce binding capacity. One should bear in mind that it is only the unbound fraction of the drug which is free to cross cell membranes and reach receptor sites to exert drug action. Furthermore, when one considers that multiple drugs are administered to sick infants there are other factors such as acidosis that may be present. Then the full clinical significance of plasma protein binding may unfortunately make itself apparent with the appearance of unexpected side effects or different effects from that anticipated by the prescribing physician.

METABOLISM

The most important route by which drugs are eliminated is through their biotransformation into inactive compounds. Although some drugs may be excreted in varying degree in the free form, most undergo metabolic transformations which serve to increase the polarity of the compound and make them more readily available for excretion by the kidney. Most metabolic transformations occur in the liver, but other tissues may have some measurable activity when examined *in vitro* system. The enzyme systems responsible for drug metabolism are usually located in the microsomal fraction upon differential ultracentrifugation. Experimental evidence has accumulated in several animal species as well as in man that the activity of many of these enzymes in the young is low and that achievement of adult values takes varying periods of time after birth.

Deficient drug metabolism appears to have been

the basis for many of the adverse effects which have been noted when drugs have been prescribed to newborn infants and dosage determined upon the basis of body size. One of the first processes to be investigated was the activity of glucuronyl transferase, the enzyme responsible for the glucuronidation of the important substrate, bilirubin. *In vitro* activity in guinea pig livers revealed absent or very low capability in the fetus and newborn animal when compared to the adult.⁹ Even though phenolphthalein and not bilirubin was used as the glucuronide acceptor and the studies were conducted in guinea pigs, the results have been used to explain the elevation of unconjugated bilirubin seen in the human newborn and premature infant. We have examined this phenomenon more specifically employing bilirubin as the aglycone acceptor. Studies in mice and in rabbits show that the newborn animal metabolized bilirubin *in vitro* to the glucuronide at about 25 to 30 per cent of the rate obtained in adult liver suspensions. However, in contrast to the reported progressive steady increase in activity from birth to adult values obtained in other animal species, a sharp increase follows the low activity in the one day old mouse to a peak value at 10 days of age, followed by a continuous decline to the achievement of adult values at approximately two months of age. We have seen this supranormal peak for a variety of other metabolic processes that we have examined *in vitro*.

Efforts to determine the regulatory factors for this peak have so far proven unsuccessful. Subsequently, we determined the ability of human neonates to conjugate via the glucuronide pathway by measuring the percentage of salicylamide glucuronide found in the urine following the oral administration of salicylamide given in a single dose at 20 mg/kg of body weight. The amount of salicylamide recovered as the glucuronide was determined quantitatively and showed a wide variation among the 14 infants in whom this parameter was investigated on the fifth day of life.¹⁰ The variation ranged from 45 per cent of the dose excreted as the glucuronide to as little as 8 per cent of the dose. Furthermore, there was an inverse relationship between the serum indirect bilirubin found on the fifth day of life and the urinary percentage of the dose of salicylamide appearing as the glucuronide. It should be emphasized that in the normal adult approximately 40 to 50 per cent of a single oral dose of the salicylamide appears as a

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glucuronide. Thus, in a sense, several of the newborn infants were glucuronidating at rates comparable to that found in the adult. This widespread variation in the ability to form the glucuronide for salicylamide is important to consider in the establishment of drug dosages in the newborn infant. The five to six fold difference would suggest great difficulty in arriving at a uniform dosage schedule other than on the basis of individual assessment.

It should not be concluded that all drug metabolic pathways are deficient in the newborn infant. We have examined the process of sulfation in the neonatal animals and have found that the neonatal mouse carries out this function just as well as the adult animal.¹¹ Here again we found a very striking supranormal peak at 28 days of age. It is interesting that many sulfated derivatives are found in the human organism as a product of metabolism during fetal and early neonatal life. Most recently we have had an opportunity to examine oxidative processes in fetal material obtained during therapeutic abortion.¹² We were surprised to find that the molecular components of the mixed-function oxidase system were present in amounts comparable to that seen in adult liver. While we could detect no overall activity for several drug substrates we were able to measure and record the hydroxylation of several endogenous hormones and several endogenous substrates, including the hormone testosterone and the fatty acid laurate. From examination of the reaction which occurred upon the addition of substrate to microsomal suspensions, we hypothesized that the deficient drug metabolism of the fetus is due to the presence at the catalytic site of the terminal oxidase of endogenous substrates with a higher affinity for that site. Drug substrates cannot gain entry to the site and thus are not oxidized even though all of the components of the electron transport chain are present in sufficient amounts. The rapid increase in drug metabolic activity noted soon after birth may be due to a decrease in concentration of endogenous substrates no longer being furnished by the maternal organism or by the placenta. While we were able to detect the presence of these components in human fetal liver, we were unable to find them in several animal species. This emphasizes again the need for pharmacologic studies in man.

A discussion of drug metabolism, even during a brief period of time, should not conclude without mention of the possibility of increasing the activity of a deficient enzyme system in patients of the neo-

natal age group. The phenomenon of induction has been found in all animal species studied and is usually produced by the administration of any one of a long list of drugs which are in common usage. Most important of these are the barbiturates. Administration is associated with an increase in liver weight and an augmentation of microsomal protein synthesis. We have studied this phenomenon using bilirubin glucuronide formation as our end point. Barbiturate administration to the neonatal mouse or rabbit has been associated with a dose related increase in bilirubin glucuronide formation as determined *in vitro*. Administration of the drug shortly before term was also associated with a marked increase in bilirubin glucuronide forming capacity in the newborn animal. We then have applied this approach to the human newborn infants and have administered phenobarbital with a significant reduction in the degree of hyperbilirubinemia found during the late neonatal period. It should be emphasized however that this phenomenon of enzyme induction following drug administration (in this case phenobarbital) is a non-specific event. Inductive effects are not limited to one enzyme system, and this approach should be used with caution and only after full consideration of the benefit to be gained against the risk of non-specific induction of a variety of enzymes whose effects may not be noted or many years afterwards.

EXCRETION

While the most important factor in determining drug dosage as mentioned above is that of drug metabolism, urinary excretion is the final route by which the drug is removed from the organism. It is pertinent to remember that in a newborn infant renal function is not completely developed (approximately 30 to 40 per cent of adult values) when utilizing the traditional functional parameters, glomerular filtration rate, and renal plasma flow. Tubular mechanisms are also important for the excretion of some drugs; and, although this phenomenon has not been studied in depth at this age, it is known that the infant cannot secrete as much hydrogen ions as the older child. We therefore studied several antibiotics in small newborn infants by means of a microdiffusion technique.¹³ Antibiotics are of particular value to investigate because they are usually eliminated via renal excretion without prior metabolism. In addition, they are often given to the newborn infant for therapeutic reasons. The serum half-life of ampicillin following an intramuscular injection of 10 mg/kg of body weight declined rapidly during the first

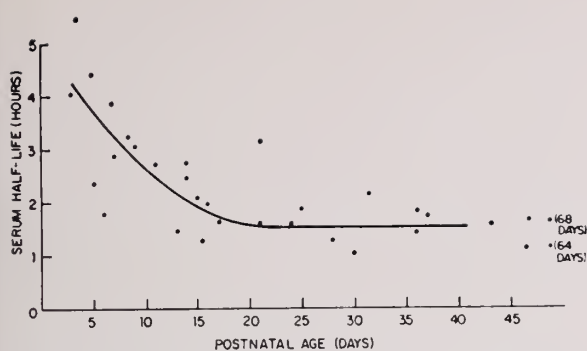


Figure 3—Correlations of serum ampicillin half-lives with postnatal age.

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two weeks of postnatal life with a less gradual change at two to four weeks and no further change beyond one month of age (Fig. 3).

To determine if the postnatal age-related changes in serum half-life (which appeared to approach adult values of 1.6 hours by three weeks of age) were independent of birth weight and thus of prenatal age, multiple dose response determinations were made in infants of widely varying birth weights. The serum half life always appeared to decline with increasing postnatal age, and the rate of change was nearly identical in all infants despite marked weight differences, which were recorded at 1100 to 1807 gm at birth. Since a direct correlation exists between gestational age and the birth weight of a premature infant, these data suggest that the maturation in serum half-life values is actually a postnatal phenomenon. The apparent volumes of distribution of ampicillin, calculated by dividing the administered dose by the extrapolated serum concentration at 0 time, were similar in all age groups. Urinary excretion, however, increased with increased postnatal age, so that premature infants older than two weeks excreted 32 per cent of the dose in 12 in contrast to 40 per cent of the dose excreted by adults during the same time period. The urinary excretion of ampicillin was low when serum half-lives were prolonged. With increasing postnatal age, the excretion increased and serum half-lives declined.

These data suggest that maturation of renal mechanisms alters elimination rates and thus the serum half-lives of ampicillin. Since only overall elimination into the urine was measured, our data do not define which function, that is glomerular filtration rate or renal tubular excretory capacity, is more important for renal excretion of ampicillin in the premature infant. In the adult penicillins

are excreted mainly by tubular secretion. We found the same results with several other penicillins: methicillin and oxacillin. We also studied several amino glycoside antibiotics which in contrast to penicillin are eliminated mainly by glomerular filtration. Patterns of elimination into the urine and serum half-lives for kanamycin, neomycin, and streptomycin were very similar to that found with penicillins. There appeared to be a postnatal maturation in the ability of the kidney to eliminate the drug which approached adult values by approximately three weeks of postnatal age.

We were, therefore, very much surprised to find that another drug, colistin, which is also eliminated by glomerular filtration gave a distinctly different pattern following administration of a single intramuscular dose of 5 mg/kg body weight. Two groups of infants were studied representing a wide range of gestational ages. Mean peak concentrations of 14.8 to 16.4 meg/ml were reached two hours after injection in the two age groups investigated. The mean serum half-life calculated from serial samples obtained following injection was 2.6 hours for several infants four days of age and 2.3 hours for six infants who were 12 to 51 days of age when the study was conducted. Although the number of patients receiving colistin was small, the serum half-lives do not differ from published data in children from serum half-lives of 2.0 hours. If glomerular filtration (the principal excretory route for colistin in adults) is the mechanism for elimination in the small infant, the serum half-life should have been prolonged, as it was for other antibiotics excreted primarily via glomerular filtration. These unexpected observations with colistin suggest that perhaps the drug is handled differently by the neonatal kidney. Most importantly, they do not permit us to generalize about drug excretion in the young infant. It therefore becomes a necessity to evaluate each drug administered to this age group when elimination is mainly by renal excretion.

I have attempted to summarize briefly the major processes which determine drug disposition within the newborn infant. Time has not permitted a comprehensive, in-depth evaluation of any given parameter. It is obvious, however, that the newborn infant clearly is different from the older child in the way in which he handles drugs. Much more data are needed if we are to administer drugs during this age period on a rational basis. Studies must be individualized because of the demonstra-

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Hemophilus Influenzal Disease-Drug Therapy And Prospects Of A Vaccine

Large Field Trials Will be Required to Assess the Effect Upon Future Incidence of Meningitis

By Georges Peter, M.D.

The recent resurgence of interest in Hemophilus influenzae disease can be attributed to the realization that, in spite of specific and effective antibiotics for this bacterium *in vitro*, H. influenzae meningitis still causes significant morbidity and mortality. Reports of so-called ampicillin "failures" have led to several recent studies, re-examining the efficacy of this drug in comparison to the antibiotic ampicillin replaced, i.e., chloramphenicol.¹⁻⁴ Furthermore, during the antibiotic era of the past 30 years, an increased number of cases of H. influenzae meningitis have been noted at several major pediatric centers.⁵⁻⁹

These considerations have led to the development of a vaccine against type b Hemophilus influenzae which is now undergoing field trials. Related studies have contributed substantially to our knowledge of the epidemiology and immunology of H. influenzae infections, but at the same time have raised critical questions that relate to the eventual success of the present vaccine.

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In the ensuing discussion recent developments in the therapy and in the immunoprophylaxis of H. influenzae disease will be reviewed.

THERAPY OF MENINGITIS

Beginning in the mid-1960's ampicillin replaced chloramphenicol as the drug of choice in the treatment of H. influenzae meningitis. The original studies of ampicillin in bacterial meningitis did not demonstrate that ampicillin was significantly more effective than chloramphenicol in H. influenzae meningitis.¹⁰⁻¹² The largest of these studies was conducted in Los Angeles by Weherle's group, who concluded that "ampicillin, although appearing to be somewhat more effective than chloramphenicol *in vitro*, did not have a substantially greater clinical therapeutic benefit than chloramphenicol".¹⁰ This study, in which ampicillin was given in a dose of 150 mg/Kg/day, and that by Fleming et al. from Toronto in which the much higher dose of 400 mg/Kg/day¹² was given, did note six and three patients respectively with H. influenzae meningitis who had positive cerebrospinal fluid (CSF) cultures 24 hours or more after initiation of chloramphenicol. In contrast, none of the ampicillin-treated patients had such slow bacteriological response. However, in the recent retro-

spective study from St. Louis by Shackelford et al., four ampicillin recipients demonstrated such a picture, and six more suffered bacteriological relapse.¹ These studies indicate that neither agent can be expected to be satisfactory in 100 per cent of cases.

Indeed, some of the so-called ampicillin failures resulted from inadequate dose or duration of therapy and others to focal sequestration of the organism, necessitating surgical drainage, such as in the case of a subdural empyema.¹³ None of these cases has been associated with strains of *H. influenzae* resistant *in vitro* to achievable serum concentrations of ampicillin. Occasional strains in the laboratory appear resistant by routine disc susceptibility testing, but when tested by tube dilution prove to be sensitive and respond *in vitro* to ampicillin.¹⁴ To date, clinically significant ampicillin-resistant strains have not been reported.

While both ampicillin and chloramphenicol are considered satisfactory for the treatment of *H. influenzae* meningitis by the Committee on Infectious Diseases of the American Academy of Pediatrics,¹⁵ ampicillin remains the initial drug of choice for several reasons. First, this drug provides a single drug with which to initiate therapy in a child with bacterial meningitis before an organism has been identified. Secondly, chloramphenicol frequently causes bone marrow depression. In the Los Angeles study, such depression, albeit reversible, occurred in 17 of 107 recipients.¹⁰ One can argue that the definite efficacy study remains to be performed, since the earlier studies have compared ampicillin and chloramphenicol in varying doses, duration, and routes of therapy (including intramuscular chloramphenicol which the Food and Drug Administration no longer considers acceptable).

These two antibiotics also differ in two other respects. First, ampicillin is bactericidal, whereas chloramphenicol is bacteriostatic. The clinical importance of this difference, however, remains unproven in bacterial meningitis. The data from Weherle's group in which ampicillin was compared to a multiple antibiotic regime of ampicillin, chloramphenicol, and streptomycin in the treatment of bacterial meningitis does suggest that drug combinations of bactericidal and bacteriostatic agents are antagonistic.¹⁶ A second difference relates to the passage of ampicillin and chloramphenicol from the blood to the brain and CSF. Antibiotics of the penicillin class, such as ampicillin, are readily passed from blood to CSF in the presence of inflamed meninges, but only poorly in its absence. Taber, Yow, and Nieberg demonstrated a progres-

Table 1
CSF Antibiotic Concentrations Expressed as
Plasma/CSF Ratio (18)

Antibiotic	Meningeal Inflammation	Plasma/CSF
Ampicillin	+	4-2.5/1
Penicillin	+	25/1
Chlortetracycline	+	2/1
Oxytetracycline	+	16/1
Tetracycline	+	2/1
Cephalothin	+	20/1
Methicillin	+	10-25/1
Lincomycin	+	2-10/1
Chloramphenicol	+ or —	2-1.5/1
Sulfadiazine	+ or —	1.25/1
Sulfasoxazole	+ or —	3/1
Erythromycin	+ or —	64-8/1

sive decline of the mean CSF/serum ratio of ampicillin during the course of therapy in association with the subsidence of meningeal inflammation.¹⁷ This percentage ratio falls from 42 per cent initially to approximately 10 per cent nine days later, at which time the CSF ampicillin concentration in some cases could conceivably be lower than the minimal inhibitory concentration of ampicillin for many *H. influenzae* isolates. In contrast, the passage of chloramphenicol into brain and into CSF is excellent irrespective of the presence or absence of inflammation. Table 1 summarizes plasma/CSF ratios for these and other antibiotics.¹⁸

No unanimity of opinion on ampicillin dosage in bacterial meningitis has been established. The studies with ampicillin at 150 mg/Kg/24 hours and at 400 mg/Kg/24 hours have yielded similar results. Since toxicity is not increased at the higher dose the trend in many centers has been to give 400 mg/Kg/24 hours. The datum on CSF levels of ampicillin indicates that a high dose is most important toward the end of therapy. Our recommendation has been to give 300-400 mg/Kg/24 hours intravenously in boluses at four hour intervals for the duration of therapy.

After therapy is initiated a repeat lumbar puncture (LP) 24-36 hours later is indicated to determine if the CSF has been sterilized. The LP is routinely performed again just before completion of therapy, by which time the spinal fluid cell count and protein should be returning to normal, with mononuclear cells predominating in the CSF differential, while the glucose is normal. In some cases, however, hypoglycorrhacia may persist and does not necessarily imply persistent infection, but rather persistently abnormal brain

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glucose metabolism. In bacterial meningitis, hypoglycorrhachia appears to result from increased glucose utilization by the brain in consequence of increased cerebral glycolysis relative to glucose oxidation.¹⁹ A constant rate of energy production by the brain in such circumstances necessitates increased glucose utilization, since glycolysis is a much less efficient method of producing high energy phosphates than is oxidation. These biochemical changes appear to result from tissue damage induced by infection, anoxia, trauma, inflammation, or any combination thereof. Glucose consumption by leukocytes and bacteria is too small to account for significant changes in the CSF glucose concentration in bacterial meningitis. Discontinuation of antibiotics after an appropriate course in a patient with a persistently low CSF glucose is indicated if the patient's other clinical parameters are consistent with adequately treated bacterial meningitis. Such a patient should subsequently be observed closely and undergo another LP 48 hours later.

How long is an appropriate course of antibiotics? This question is best answered by the patient's response to therapy, but in general 10 days of antibiotics is sufficient. Fleming in Toronto advises that 7 days of ampicillin at 400 mg/Kg/day is sufficient in most cases,²⁰ while the Los Angeles (L.A.) County group (150 mg/Kg/day continue treatment until the patient has been afebrile for at least 5 days and the CSF cell count is less than 30/mm³ with 5 per cent or less polymorphonuclear leukocytes, the glucose is normal, and the protein is normal or nearly so.¹⁴ Fleming contends that such criteria unnecessarily prolong therapy and hospitalization, since his patients at the end of 7 days therapy often do not satisfy the L.A. criteria.²⁰ Results at either center are similar, and the difference of opinion on duration may relate to the difference in ampicillin dosage.

Fever alone should not be used as the only evidence in support of persistent meningeal infection, since continuing or recurrent fever at the end of a week of therapy is commonly due to phlebitis, drug fever, a subdural sterile effusion, or a nosocomial viral infection.²¹ Since fever can also be due to mastoiditis, sinusitis, septic arthritis (undrained), subdural empyema, or inadequately treated meningitis, good clinical judgment remains the best guide.

Antibiotic therapy, however, is only one aspect of the management of patients with bacterial men-

Table 2
Mortality of Bacterial Meningitis
Children's Hospital Medical Center, Boston
1961-1969

Year	Total No. Cases	Mortality	No. of Cases Due to H. Influenzae, b	Mortality
1961-63	190	6 (3.2%)	101	3 (3%)
1964-66	183	5 (2.7%)	83	1* (1.2%)
1967-69	187	1 (0.5%)	89	0 (0%)
Total	560	12 (2.1%)	273	4 (1.5%)

* 1964

ingitis. In comparison to the 5-10 per cent mortality in the 1950's, the mortality rate at Children's Hospital in Boston of bacterial meningitis decreased in the subsequent decade to 2.1 per cent and to 1.5 per cent for H. influenzae meningitis. Table 2 demonstrates a steady decline in the mortality figures in the 1960's. Since ampicillin did not replace chloramphenicol until 1965-66, this decline is probably attributable, at least in part, to improved supportive care. Attention must be given to fluid and electrolyte balance, pH, tissue oxygenation, blood pressure, and treatment of complications such as cerebral edema and airway obstruction in the management of bacterial meningitis.

OTITIS MEDIA

While H. influenzae is sensitive *in vitro* to a variety of antibiotics, including penicillin G, ampicillin, chloramphenicol, erythromycin, polymyxin, and tetracycline, clinical response does not always correlate with this sensitivity. For example, H. influenzae otitis media often does not respond to erythromycin. Howie and Ploussard, who routinely perform middle ear aspirates in patients with otitis media, were able to recover H. influenzae from 17 of 20 patients with otitis media treated with erythromycin.²² While antimicrobial activity was demonstrable in the middle ear fluid, the concentration was less than the minimal inhibitory concentration (MIC) of erythromycin for many H. influenza strains. H. influenzae is sensitive *in vitro* to the relatively low concentrations of ampicillin achieved by the currently recommended doses (50-100 mg/Kg/d). A sulfonamide and penicillin is an effective alternative regime in the treatment of otitis media in young children.

An interesting observation in patients with otitis media, with possible important implications for the efficacy of the present vaccine, has been the demonstration of non-encapsulated *H. influenzae* strains in middle ear aspirates. Harding et al. at Children's Hospital in Boston recently found that 90 per cent of *H. influenzae* isolates from the middle ear exudate of children with symptomatic otitis media were non-typable, and only 9 per cent were type b.²³ These non-encapsulated organisms have usually been considered non-pathogenic in children.

THE VACCINE

Approximately 60 per cent of bacterial meningitis in children is caused by *H. influenzae*; 90 per cent of these cases occur in children under 4 years of age, and the majority occur in infants. A recent epidemiological study in Mecklenburg County, North Carolina indicated that the attack rate for *H. influenzae* meningitis during a 5 year period is one per 400 births.²⁴ In comparison, the incidence of cystic fibrosis is approximately one per 2,000 births, while Down's syndrome occurs in about every 500 births. Furthermore, the number of cases of *H. influenzae* meningitis during the last 30 years appears to have increased in several major pediatric centers, including Los Angeles,⁵ Toronto,⁶ Boston,⁷ Pittsburgh,⁸ and Columbus, Ohio.⁹

While the mortality of this disease in the past decade has decreased slightly to less than 5 per cent, no data suggest that the incidence of significant and permanent neurological impairment among surviving children has decreased. Studies by Sproles et al.²⁵ and Sell et al.²⁶ indicate that 40 per cent of the survivors suffer permanent neurological sequelae. Based upon these morbidity and mortality estimates and recent epidemiological studies, 300-1000 children are estimated to die each year and 3,000-6,000 survivors suffer permanent sequelae from this disease. In comparison, poliomyelitis in 1953 caused 800 deaths and 5,000 survivors with sequelae, while measles in 1958 was responsible for 552 deaths and an estimated 2,000-3,000 children with sequelae. Furthermore, *H. influenzae* is an important cause of septic arthritis and epiglottitis in children and occasionally results in pneumonia, empyema, and cellulitis.

Each of these diseases is caused by an encapsulated, typable strain of *Hemophilus influenzae*, essentially all of which are type b. These diseases are invasive in contrast to localized *H. influenzae*

disease, such as otitis media. The capsule in typable *H. influenzae* strains is comprised of a type specific polysaccharide which in type b strains is a polymer of a pentose sugar, polyribophosphate (PRP). The other types of encapsulated *H. influenzae*, in contrast, have capsules formed of hexose sugars. The available evidence indicates that the type b capsule confers pathogenicity. That human resistance to invasion by type b strains results from anti-capsular (or anti-PRP) antibody is suggested by the following:

1) Nearly 40 years ago Fothergill and Wright observed an inverse correlation among different age groups between the prevalence of *H. influenzae* meningitis and the bactericidal activity in whole blood against the organism, but not against unencapsulated strains.²⁷ This activity was later found to be mediated by serum antibody and complement. The nearly universal finding of serum anti-*H. influenzae* b antibody among adults correlates with the rarity of this type of meningitis in adults. Similarly, disease is rare among newborns, whose serum bactericidal activity and resistance are presumably transplacental-acquired. Recent studies from Children's Hospital have reaffirmed these findings.²⁸

2) Children with congenital agammaglobulinemia are very susceptible to pyogenic bacteria, and particularly to *H. influenzae*, type b until therapy with commercial gamma globulin is prophylactically instituted. Gamma globulin has proved extremely effective in preventing *H. influenzae* infections in these patients.

3) In the 1940's the mortality of *H. influenzae* meningitis was reduced by the therapeutic use of intravenous rabbit anti-*H. influenzae* b serum.²⁹ In animals pre-absorption of the immune sera with the capsular antigen eliminated the protective effect.³⁰ Most recently post-immunization serum from an adult immunized with PRP has been demonstrated to protect weanling rats against approximately 10 times the LD₅₀ dose of *H. influenzae* b, whereas pre-immunization sera did not.

Polyribophosphate, therefore, is the obvious, initial choice for an effective vaccine against invasive *H. influenzae* disease. PRP is readily purified from liquid cultures of a strain of *H. influenzae* b, and has been shown to be non-toxic in animal studies. Two groups of investigators have prepared this vaccine and initiated early trials, one at Children's Hospital in Boston under the direc-

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tion of Drs. David H. Smith and Porter Anderson and the other at the National Institutes of Health (N.I.H.) under Dr. John Robbins by our group in Boston.

The initial studies were performed in 62 adult volunteers who received PRP in doses of 0.0067 to 67 mcg intramuscularly or intradermally. Antibody activity was assayed in recipients prior to and 2-3 weeks after immunization by bactericidal and passive hemagglutination assays. PRP doses of 0.0067 mcg in two subjects did not raise anti-PRP activity, but 0.067 mcg produced significant rises in roughly half and 0.67 mcg or greater stimulated antibody in essentially all recipients. Responders are defined as those with 4-fold or greater rise in titer. Non-responders who received 0.67 mcg or more all had high pre-immunization titers, and of those who did not respond by the bactericidal assay all but one had a significant rise in passive hemagglutination activity. The two routes of vaccine administration, intradermal and intramuscular, were both very effective in producing significant rises in antibody titers.

The vaccine was generally innocuous for those immunized. Approximately 3/5 of those receiving the vaccine intradermally had delayed erythema at the injection site, accompanied in a few instances by induration. No visible reactions resulted from the intramuscular injection. Slight tenderness at the injection site was noted by 4 of 7 recipients of 67 mcg. Two individuals who received 6.7 mcg intradermally reported headache, one of whom also had malaise and fatigue, for which other causative factors than the vaccine could not be excluded.

Subsequently, we initiated a vaccine trial in young children to assess the toxicity and immunogenicity of PRP in children. The 140 children who participated were in good health and ranged in age from 5 months to 4 years and 11 months. Doses of PRP of 0.67, 3.3, 17, or 67 mcg were given intramuscularly. Reactions for the first 3 days after immunization were recorded by the parents who had been instructed to record temperatures and inspect the injection sites.

The immunizations were generally well tolerated. A few children developed coincidental illnesses, including one with otitis media and another with pharyngitis, for which they were seen by their pediatrician. These children are excluded from Tables 3 and 4, which summarize the observed reactions considered possibly related to the vaccine.

Table 3 demonstrates that the local reactions were most frequent among recipients of the 67 mcg dose. Most local reactions consisted of pain only, a symptom also noted previously in adult recipients of this dose. The pain was mild, elicited only by palpation, and disappeared in most by the second day and in all by the third day. Similarly, erythema and induration usually were noted only on the evening after immunization and was one inch or less in diameter. In no case did the parents consider these local reactions marked enough to notify their pediatrician.

Among systematic reactions (Table 4), fever was observed in 25 children, most commonly among the recipients of 67 mcg. Nearly 75 per cent (18 of 25) of these children had fevers below 101°F, the significance of which is not clear, since normal young children occasionally have evening temperatures in this range. If one accepts only temperatures of 101°F or greater as abnormal, only 7 of 140 recipients were febrile. The highest temperature reported was 101.8°F. Fever usually occurred either on the first or second day. Of the 25 children with any fever, only 3 children had systemic symptoms. Two siblings had mild rashes of the face and arms, and a third child vomited the night after immunization experienced with subsequent anorexia. Etiologies other than the immunization for these symptoms could not be ruled out.

In all cases these local and systemic reactions were mild, and in most cases they would have been unnoticed had the parents not been instructed to make specific observations.

Serological data are available from 125 of the 140 vaccine recipients (Table 5). The antibody concentrations in this study were measured by radioimmunoassay which is a much more sensitive assay than the bactericidal and hemagglutination assays utilized in the previously described vaccine study. Significant antibody response is defined as a rise in antibody concentration greater than two standard deviations of the pre-immunization concentration. This definition thus gives a 95 per cent confidence limit. In nearly all cases these rises were 50 per cent or greater. By this definition doses of 3.3 and 17 mcg of PRP produced antibody rises in 85 per cent of recipients. With 67 mcg, only half of the recipients demonstrated rises. Geometric mean titers were distinctly higher in the 3.3 and 17 mcg groups than in the 0.67 and 67 mcg recipients.

Table 3
Reported Local Reactions During 3 Days
Subsequent to PRP Immunization

Reaction	PRP Dose (mcg) and Volume (ML)			
	0.67 (0.1)	3.3 (0.4)	17 (0.1)	67 (0.4)
Erythema	1	0	0	3
Pain	0	0	1	7
Erythema & Induration	0	0	1	1
Erythema & Pain	0	0	0	1
Erythema & Induration & Pain	0	1	0	0
Total No. of Children With Reactions	1	1	2	12
No. of Children Receiving PRP	34	35	36	35

Table 4
Reported Systemic Reactions During 3 Days
Subsequent to PRP Immunization

Reaction	PRP Dose (mcg) and Volume (ML)			
	0.67 (0.1)	3.3 (0.4)	17 (0.1)	67 (0.4)
Fever <101°F	2	5	3	8
Fever >101°F	1	3	0	3
Fever >101°F & Local Reaction	0	0	0	1
Rash	0	2	1	0
Vomiting, Anorexia	0	0	0	1
No. of Children Receiving PRP	34	35	36	35

The relationship of age to immunological response for all doses of PRP is listed in Table 6. Among infants 6 to 12 months of age only 1 of 13, or 7.7 per cent, responded to any dose of PRP, in contrast to the groups above 12 months of age, in whom 78 per cent of 112 children responded. Children over 3 years of age demonstrated the greatest fold rise in anti-PRP antibody.

In summary, then, this study demonstrated the following:

- 1) PRP is well tolerated by young children. Reactions were more common with a dose of 67 mcg, but were generally mild and transient.
- 2) PRP is immunogenic in children.
- 3) Single doses of 3.3 and 17 mcg are clearly superior to 0.67 and 67 mcg of PRP.
- 4) Immunological responsiveness to PRP appears to be age-related.

Table 5
Effect of Immunization of Children with PRP
on Anti-PRP Antibody Concentration

	Dose (mcg)			
	0.67	3.3	17	67
No. of Recipients	32	33	34	26
No. with Response*	18	28	29	13
Geometric Mean Titers of Anti- PRP (NG/ML)				
Pre-PRP	130	42	100	28
Post-PRP 3 weeks	470	910	1100	110
Median Age of Recipients	36 mos.	38 mos.	29 mos.	21 mos.

* Defined as rise in antibody concentration greater than 2 standard deviations of the pre-immunization concentration.

Table 6
Relation of Age and PRP Dose to Antibody
Response
No. with Rise*/No. Immunized at Dose (uG)

Age (mos.)	0.67	3.3	17	67	Totals (%)
6-12	0/3*	0/1	1/3	0/6	1/13 (7.7)
13-24	3/6	6/7	11/12	4/8	24/33 (73)
25-36	55/9	7/8	4/4	8/8	24/29 (83)
37-48	9/12	13/14	11/13	1/4	34/43 (79)
> 48	1/2	2/3	2/2	—	5/7 (71)
Total	18/32	28/33	29/34	13/26	88/125 (70)

* Defined as rise in antibody concentration greater than 2 standard deviations of the pre-immunization concentration.

The age-related immunological responsiveness was not unexpected in view of data obtained from patients with H. influenzae meningitis, epiglottitis, and septic arthritis in Boston³¹ and in Rochester.³² By the less sensitive technique of hemagglutination most patients in these studies less than two years old did not develop significant titer rises during convalescence. In contrast, nearly all patients two years of age or older had marked titer rises. By radioimmunoassay some but not all of the patients under two have demonstrated convalescent titer rises, but these rises are generally of a lower magnitude, more sluggish, and shorter in duration than that observed in older patients.

Several major questions remain to be answered. Does the poor response of infants to PRP indicate

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an inability of PRP to stimulate a primary response? Most of the children who responded to PRP were older than 18 months and may have been having a secondary exposure to the antigen. Another possibility is that the lack of response of the infants may have been dose as well as age-related, since only 4 of the 13 infants who were immunized received the optimal doses of 3.3 or 17 mcg. What will be the response to multiple PRP injections during early infancy, as is the current practice with most existing bacterial vaccines? Will the administration of PRP in conjunction with DPT (diphtheria-pertussis-tetanus vaccine) affect the response to PRP? Clearly, infants of 3-12 months are at highest risk relative to H. influenzae b meningitis and are the primary target of an active immunization program; further studies on dosages and vaccine schedules in young infants are needed.

Why do children seemingly respond poorly to 67 mcg of PRP? Is this really a poor response or only the result of circulating PRP binding anti-PRP antibody, which then cannot be detected by present assays. Calculations based upon the assumption that PRP is not degraded and circulates freely in the total body extracellular water and upon the observation that PRP can bind about 50 times its weight of anti-PRP antibody indicate that a 10 Kg infant given 100 mcg of PRP would have 40 nanograms of PRP per ml of extracellular water. This circulating PRP could bind as much as 2000 nanograms of anti-PRP antibody/ml and thus could mask a substantial antibody response. This possibility is currently under investigation.

The most important question is the concentration of circulating anti-PRP antibody that will protect against invasive Hemophilus influenzae b. To gain some insight into this question, we measured the concentration of circulating anti-PRP in 6 agammaglobulinemic children just prior to their monthly gamma globulin injections. These injections empirically protect these children from invasive H influenzae b infections. The levels of anti-PRP in these 6 agammaglobulinemic patients ranged from 210 to 350 nanograms/ml with a geometric mean titer of 270. The post-immunization geometric mean titer for the 3.3 and 17 mcg vaccine recipients greatly exceeds these figures of 210 to 350. In addition, the geometric mean titer by radioimmunoassay of a randomly selected group of healthy young adult women was only 200 ng/ml.

FUTURE OF THE VACCINE

At present further vaccine trials in young children are in progress and hopefully will provide the answers to these critical questions. The possibility should not be discounted that immunological response to PRP is not a reliable indicator of subsequent protection against invasive H. influenzae disease. For example, in spite of the lack of a detectable antibody response to the capsular antigen of H. influenzae b of some young children following meningitis, second attacks of H. influenzae meningitis are rare in immunologically normal children. The effectiveness of the present vaccine in young infants may be similar. To examine this possibility will require field trials in a population large enough to assess the vaccine's effect upon the incidence of subsequent H. influenzae meningitis.

REFERENCES

- ¹Shackelford PG, et al.: Therapy of Haemophilus influenzae meningitis reconsidered. *N Engl J Med* 287:634-8, 28 Sep 72
- ²Schulkind ML, et al.: A comparison of ampicillin and chloramphenicol therapy in Hemophilus influenzae meningitis. *Pediatrics* 48:411-16, Sep 71
- ³Barrett FF, et al.: A 12 year review of the antibiotic management of Hemophilus influenzae meningitis. *J Pediat* 81:370-7, Aug 72
- ⁴Haltalin KC, Smith B: Reevaluation of ampicillin therapy for Hemophilus influenzae meningitis. *Am Dis Child* 122:328-36, Oct 71
- ⁵Koch R, et al.: Management of bacterial meningitis in children. *Pediat Clin N Amer.* 8:1177-97, Nov 61
- ⁶Gossage D: Acute purulent meningitis in children. experience at the Hospital for Sick Children, Toronto. *Can Med Assoc J.* 90:615-17, 7 Mar 64
- ⁷Haggerty RJ, Ziai M: Acute bacterial meningitis. *Adv Pediat.* 13:129-81, 1964
- ⁸Michaels RH: Increase in influenza meningitis. *N Engl J Med.* 285:666-7, 16 Sep 71
- ⁹Smith EWP Jr, Haynes RE: Changing incidence of Hemophilus influenzae meningitis. *Pediatrics.* 50:723-27, Nov 72
- ¹⁰Mathies AW Jr, et al.: Experience with ampicillin in bacterial meningitis. *Antimicrob Agents Chemother.* 5:610-7, 1965
- ¹¹Barrett FF, et al.: Ampicillin in the treatment of acute suppurative meningitis. *J Pediat.* 69:343-53, Sep 66
- ¹²Fleming PC, et al.: Ampicillin in the treatment of bacterial meningitis. *Antimicrob Agents Chemother.* 6:47-52, 1966
- ¹³Yow MD: Ampicillin in the treatment of meningitis due to Hemophilus influenzae: An appraisal after 6 years of experience. *J Pediat.* 74:848-52, May 69
- ¹⁴Wehrle PF, et al.: The critically ill child: management of acute bacterial meningitis. *Pediatrics.* 44:991-8, Dec 69
- ¹⁵American Academy of Pediatrics: Report of the Committee on Infectious Diseases. 16th edition. Evanston, Illinois, revised 1971

(Concluded on page 295)

ORGAN TRANSPLANTS

Although the first form of transplantation may have been blood transfusion, occurring hundreds of years ago, the more recent successful transplantations of kidney, heart, lung, and liver have been spectacular and have given new hope to otherwise doomed patients. Unfortunately, good results occur only with kidney transplants. At the University of Colorado Medical Center, 395 patients received 395 kidney transplants, and as of March 1, 1972, there were 258 survivors with a survival rate of 65 per cent. The longest survivor was over 10 years. Heart transplants have been less successful, and lung and liver the least. As of March 1, 1972, there were 187 heart transplants in the world (120 in the U. S. — 67 foreign) and 29 survivors. Three survived for over 42 months.

The Honorable Sherman G. Finesilver,¹ United States District Judge, Colorado, lectured at the National College of State Judiciary on the legal and medical challenges of organ transplants. His remarks are pertinent to problems facing the medical and legal profession regarding transplants. The source of organs varies. "Transplants may be effected from one living person to another, or from a dead person into the living. If the former is involved, all that is required are appropriate informed consents, authorizing the surgical removal on the one hand and the implantation on the other. But if utilization of all or any part of the body after death is intended, the legal problems become more complicated. The complications result in part from the variety of interests in the dead body."

Legal guidelines for donation of organs are based on Common Law, or the recently established Uniform Anatomical Gift Act. In Common Law the decedent cannot will his body, or any part, to medical science. The spouse or next-of-kin have complete control of the disposition of the body. According to the Uniform Anatomical Gift Act, an adult patient is empowered during his lifetime

to execute a written instrument which is binding on the next-of-kin at his death, making a valid gift of his body or organs he desires to any donee for transplant or other purposes. In the absence of such a document only the next-of-kin have the right, which they acquire upon the death of the patient, of making such a gift. Most states have adopted the Uniform Anatomical Gift Act.

Unfortunately, the decisions of what constitutes death and when can an organ be removed from a donor continue to be problems and potential causes for law suits. Speedy removal of donor organs for transplantation is essential in order to ensure their viability. The question is What constitutes death? The kin of a decedent donor may be agreeable to the procedure, yet are usually most anxious to protect his rights. One must choose between a medical definition of death such as brain death, or a legal definition of the "cessation of life by total stoppage of the circulation of the blood and cessation of the individual's vital functions" In general, the decision has been based on the combination of the above criteria, of which brain death has been considered the paramount factor.

Recently, five states (Florida, Utah, Hawaii, Montana, and Wisconsin) have considered "Death With Dignity" legislation. This provides that any person may execute a document, similar to a will, directing that he shall have the right to death with dignity and that his life shall not be prolonged beyond the point of meaningful existence.

The medical profession is painfully familiar with these dilemmas, yet is willing to face the challenges, encouraged by such advances as the organ transplant, even if successes are as yet limited. Artificial organs eventually may help solve some of these problems.

REFERENCE

¹Lecture to National College of State Judiciary, Denver, Colorado, 1971.

POLICYHOLDER MORTALITY CONTINUES TO DECLINE

The Metropolitan Life Insurance Company has reported that mortality among its standing ordinary policyholders declined in 1971 for the fourth successive year. The death from all causes was found to be two per cent lower than in 1970 and four per cent lower than the average for 1966-1970.

This report is of course welcome news.

In 1971 each of the major causes of death, other than cirrhosis of the liver, registered either the same or somewhat lower death rates than in 1970. The figures for the years 1966 through 1970

(Continued on next page)

have been adjusted to take into account changes in the age and sex composition of Standard Ordinary policyholders in 1971.

The cardiovascular-renal diseases as a group, which are responsible for over one-half of all deaths among these policyholders, recorded a 4 per cent reduction in mortality. The death rate from pneumonia and influenza, which shows marked fluctuations from year to year, declined 15 per cent. Mortality from tuberculosis and from the combined cause group bronchitis, emphysema, and asthma each decreased by 4 per cent from the corresponding rates of a year ago. Motor vehicle accidents, which are responsible for about half of all accident fatalities in this experience, showed a decline of 2 per cent. The death rate from diabetes mellitus decreased slightly, and mortality from suicide and all forms of cancer, including cancer of the respiratory system, remained about the same. In contrast, the death rate from cirrhosis of the liver rose 8 per cent.

During 1971 the Company paid about \$850,000 in claims on all Ordinary insurance on account of war deaths in Southeast Asia, \$1,350,000 less than the year before. These war claims paid in 1971 declined to less than one-fifth-of-one per cent of total Ordinary claims paid, compared with about one-half-of-one per cent in 1970.

The death rates experienced during 1971 were below the average for the five-year period of 1966-1970 for all major causes of death, except cirrhosis of the liver, cancer of the respiratory system, and suicide. Cirrhosis of the liver recorded a 9 per cent increase in mortality; the death rate from cancer of the respiratory system rose 7 per cent; and suicide was up 4 per cent. Tuberculosis showed the largest decrease, 28 per cent, followed by pneumonia and influenza with a decline of 19 per cent.

In the general population of the United States the death rate from all causes combined was fractionally lower in the first 10 months of 1971 than in the corresponding period of 1970 and 2 per cent lower than the average for the same period

of 1966-70. These comparisons do not take account of the changes in the age and sex distribution of the population from year to year.

Cirrhosis of the liver was the only major cause of death for which the mortality rate was higher in the first 10 months of 1971 than in the like period of 1970, the rise being just one per cent. Tuberculosis and pneumonia and influenza showed the largest decreases in mortality, namely, 19 per cent and 13 per cent, respectively. Diabetes mellitus and the combined cause group, bronchitis, emphysema, and asthma, followed with decreases of 2 per cent each. In the first 10 months of 1971, the death rates from the cardiovascular-renal diseases, accidents (all forms), motor vehicle accidents, and suicide each showed decreases of one per cent over the rates for the corresponding period of 1970, while the death rate from cancer (all forms) remained about the same.

In relation to the average mortality during the first 10 months of 1966-70, the death rate from cirrhosis of the liver was up 9 per cent during the first 10 months of 1971 and the mortality rate from suicide increased by 4 per cent. Cancer (all forms) recorded a 2 per cent increase in mortality over the average of the preceding five years and the death rate from diabetes mellitus rose 1 per cent. In contrast, tuberculosis recorded a 31 per cent decrease while the death rate from pneumonia and influenza declined by 15 per cent. The death rate from the cardiovascular-renal diseases and accidents (all forms) decreased by 3 per cent. Mortality from motor vehicle accidents was down 2 per cent.

The progressive decline in mortality from most major causes of death reflects progressive improvement in the effectiveness of preventive medicine, the quality of medical care, and the standard of living in the United States (the professional doom-sayers notwithstanding). Yet the increase in the death rate from cirrhosis of the liver (alcohol), cancer of the respiratory tract (tobacco), and suicide are sad evidences of the frailty of man.



Dr. Charles E. Millard has been appointed delegate to the Rhode Island House of Delegates representing the American Board of Family Practice specialty. In a recent Society newsletter, it was erroneously reported that Doctor Millard represented the Rhode Island Chapter, American Academy of Family Practice.

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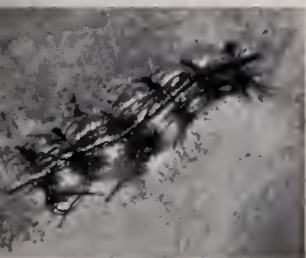
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Warnings: Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis. In theory a curare-like action may occur, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

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Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides

are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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HEMOPHILUS INFLUENZAL DISEASE-DRUG THERAPY

(Concluded from page 292)

- ¹⁶Wehrle PF, et al.: Bacterial meningitis. *Ann NY Acad Sci.* 145:488-98, 27 Sep 67
- ¹⁷Taber LH, et al.: The penetration of broad-spectrum antibiotics into the cerebrospinal fluid. *Ann NY Acad Sci.* 145:473-81, 27 Sep 67
- ¹⁸Smith AL: Personal Communication
- ¹⁹Menkes JH: The causes for low spinal fluid sugar in bacterial meningitis: another look. *Pediatrics.* 44:1-3, Jul 69
- ²⁰Kirby WMM, et al.: Round table: optimal duration of antibiotic therapy in severe bacterial infections. *Antimicrob Agents Chemother.* 7:183-202, 1967
- ²¹Balagtas RC, et al.: Secondary and prolonged fevers in bacterial meningitis. *J Pediat* 77:957-64, Dec 70
- ²²Howie VM, Ploussard JH: The "In vivo sensitivity test"—bacteriology of middle ear exudate. *Pediatrics.* 44:940-4, Dec 69
- ²³Harding AL, et al.: Hemophilus influenzae isolated from children with otitis media. *Proceedings of a Conference on Hemophilus Influenza*, Nashville, Tennessee, 1973.
- ²⁴Parke JC Jr, et al.: The attack rate, age incidence, racial distribution, and case fatality rate of Hemophilus influenzae type b meningitis in Mecklenburg County, North Carolina. *J Pediat* 81:765-9, Oct 72
- ²⁵Sproles ET III, et al.: Meningitis due to hemophilus influenzae: long-term sequelae. *J Pediat.* 75:782-88, Nov 69
- ²⁶Sell SHW, et al.: Long-term sequelae of Hemophilus influenzae meningitis. *Pediatrics.* 49:206-11, Feb 72
- ²⁷Fothergill LD, Wright J: Influenzal meningitis: relation of age incidence to the bactericidal power of blood against the causal organism. *J Immunol.* 24:273-84, Apr 33
- ²⁸Anderson P: Human serum activities against Hemophilus influenzae, type b. *J Clin Invest.* 51:31-8, Jan 72
- ²⁹Alexander HE: Treatment of type b Hemophilus influenzae meningitis. *J Pediat.* 25:517-32, Dec 44
- ³⁰Alexander HE, et al.: Protective or curative element in type b H. influenzae rabbit serum. *Yale J Biol Med.* 16:425-34, May 44
- ³¹Greenfield S et al.: Acquisition of type-specific antibodies to Hemophilus influenzae type b. *J Pediat.* 80:204-8, Feb 72
- ³²Norden CW, et al.: Immunologic responses to Hemophilus influenzae meningitis. *J Pediat.* 80:209-14, Feb 72



HOUSE OF DELEGATES REPORT

(Continued from page 261)

X. DECISION OF STATE PEER REVIEW

1. After all evidence on both sides has been presented, a decision shall be made by the State Peer Review Committee. A copy of the decision shall be forwarded to the complainant or petitioner and the respondent within 30 days.

2. In the letter to both parties concerning the decision, notification of the right to appeal to the

Council of the Rhode Island Medical Society shall be included.

3. The President of the Society shall be notified personally of any action of the Committee against any physician before notice of such action is forwarded to a third party.

XI. APPEAL

If either party is not in agreement with the decision rendered he may within 10 days:

1. Submit his reasons for disagreement in writing to the Council of the Society, which shall then determine whether or not an appeal is justified. It shall notify all parties of its decision.

2. If an appeal is deemed justified, the Council shall set a reasonable time and place for such an appeal and it shall notify all parties.

3. A decision rendered by the Council shall be final since the Council is the final arbiter of issues involving members, according to the bylaws of the Society.

XII. HOSPITAL UTILIZATION COMMITTEES

Since the role of the Peer Review Committees is the evaluation by practicing physicians of the quality and efficiency of services ordered or performed by other practicing physicians, including their services rendered within a hospital, it is vitally important that hospital medical staffs play a strong supporting role through the work of physician utilization committees within the hospital staff framework.

Such utilization committees have the two-fold role of examining the efficiency of institutional use, the appropriateness of admissions, services ordered and provided, length of stay, and discharge practice (both on a current and retrospective basis), and secondly, development of the Medical Audit, a retrospective examination of the clinical application of medical knowledge, advancing the level

(Continued on next page)

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of medical care in the institution through an educational process.

The acceptance by 14 of the major hospitals of the State of the Professional Activities Studies (PAS) and the Medical Audit Program (MAP) sponsored by the Commission on Professional and Hospital Activities (PAS-MAP) of Ann Arbor, Michigan, provides excellent referral data for utilization committees to make comparisons and to formulate recommendations to assure quality care and utilization.

XIII. NORMS OF HEALTH CARE SERVICES

The physicians of Rhode Island have applied professionally developed norms of care and treatment through the years as the result of active participation in third party payor programs for health services (i.e. State Social Welfare Department, State Temporary Disability Insurance Program, Blue Cross, Blue Shield).

Physicians have strongly supported the enrollment by general hospitals in the State in the PAS-MAP program with the result that Rhode Island is the only state with almost complete coverage

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for this computerized statistical data system on lengths-of-stay for institutional care, by age and diagnosis.

However, the judgment of the attending physician, based on a rational approach to the specific clinical problem at the time, will be recognized. Obviously, then, there will be medically justifiable deviations from any stated criteria.

TO PHYSICIAN

Dear Doctor

has requested the Peer Review Committee of the Rhode Island Medical Society to review certain information relating to . Enclosed you will please find a copy of the request. Doctor Paul is the Chairman of the Committee.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely yours,

TO CHAIRMAN OF STATE PEER REVIEW COMMITTEE

Dear Doctor

has requested that the Committee review a case or cases, or problems involving services performed by

Enclosed you will please find a copy of the request for review and accompanying documents which have been submitted by

has also been furnished a copy of the request for review and has been notified of request for a meeting.

Sincerely yours,

TO COMPLAINANTS

Dear Mr.

Thank you for your letter of . We have informed the Chairman of the State Peer Review Committee of your request for review. You will be notified of the date set for the meeting.

If we can be of further service, please feel free to communicate with me.

Sincerely yours,



DRUG DISPOSITION IN THE FETUS AND NEWBORN INFANT

(Concluded from page 285)

tion that processes can be highly selective and specific.

Acknowledgement of the help and collaboration of many colleagues in gathering these data is gratefully made. Without their expert collaboration, none of these studies reported would have been possible. The names of the individuals are listed under the specific bibliographical references. Acknowledgement is also made of the support for some of these studies in part by USPHS Research Grant HD JDBRG.

REFERENCES

- ¹Yaffe SJ: Some aspects of perinatal pharmacology. *Ann Rev Med* 17:213-34, 1966
- ²Mirkin BL: Developmental pharmacology. *Ann Rev Pharmacol* 10:255-72, 1970
- ³Jusko WJ, et al.: Riboflavin absorption and excretion in the neonate. *Pediatrics* 45:945-49, Jun 70
- ⁴Burch HB, et al.: Fluorometric measurements of riboflavin and its natural derivatives in small

quantities of bloodserum and cells. *J Biol Chem* 175:457-70, Aug 48

- ⁵Fichter EG, Curtis JA: Sulfonamide administration in newborn and premature infants. *Pediatrics* 18:50-8, Jul 56
- ⁶Krauer B, et al.: Pharmakokinetik der Sulfonamide im ersten Lebesjahr. *Pharmacologia Clin* 1:47-53, 1968
- ⁷Kupferberg HJ, Way EL: Pharmacologic basis for the increased sensitivity of the newborn rate to morphine. *J Pharmacol Exp Ther* 141:105-12, Jul 63
- ⁸Hernandez A, et al.: Pharmacodynamics of ³H-digoxin in infants. *Pediatrics* 44:418-28, Sep 69
- ⁹Brown AK, Zuelzer WW: Studies on the neonatal development of the glucuronide conjugating system. *J Clin Invest* 37:332-40, Mar 58
- ¹⁰Stern L, et al.: Effect of phenobarbital on hyperbilirubinemia and glucuronide formation in newborns. *Amer J Dis Child* 120:26-31, Jul 70
- ¹¹Percy AK, Yaffe SJ: Sulfate metabolism during mamalian development. *Pediatrics* 33:965-8, Jun 64
- ¹²Yaffe SJ, et al.: The presence of a monooxygenase system in human fetal liver microsomes. *Life Sci* (11) 9:1189-200, 22 Oct 70
- ¹³Axline SG, et al.: Clinical pharmacology of antimicrobials in premature infants: II. Ampicillin, methicillin, oxacillin, neomycin, and colistin. *Pediatrics* 39:97-107, Jan 67



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PROBLEMS OF EMERGING SEXUALITY AND THEIR MANAGEMENT

(Continued from page 279)

more than one it would be taken away or even aborted, if pregnancy were discovered early enough. We watched with our kids and talked about it afterwards. This movie was to me another sign that perhaps the media are beginning to face up to their responsibilities for education about human concerns.

There are curricula for teaching about sexuality; if you wish to find out about them, you may write to the American Association of Sex Educators and Counsellors in Washington, or you can write to SIECUS in New York. Much careful thought has been put into curriculum development. There are media preparations such as movies film strips and slides already available. Some of these are simple, some are more specific and explicit. Explicit material about human sexuality is becoming available and has a definite place in teaching. It will find its place in teaching human sexuality to sex educators; whether it ever makes its way down to the young people I do not know; that undoubtedly will be controversial. I have approached my local minister to see if I could show an explicit film to the young people on normal intercourse between loving married couples and I got a "no" this year.

There is evidence that sex education works. There are reports showing that when young people are educated about venereal disease about sexuality about birth control, and about pregnancy, the incidence of all these problems can be reduced. I know personally from my own clinical practice that they can be reduced. And I know from the work of Bill Sarrel at Yale and Harold Osofsky at Syracuse, that the incidence of recurrent unwanted pregnancy or out-of-wedlock pregnancy

can be reduced. But why should a *first* pregnancy be required before we can plug young persons into a program which will help them understand and control their sexual natures?

LEGAL STATUS

Legal changes must come about. The point has already been made that many of the things we do as physicians, such as giving birth control on the "QT" at an adolescent clinic are unlawful. What a strange anachronism that the law which allows us to treat venereal disease in minors without informing the parents does not extend to giving out birth control! We need help from the legal profession in this area, and we need to be able to give sex counselling and birth control counselling legally. Young people are old enough and big enough for sex, and they are certainly doing "it", so we need legal backing to help teach them to be responsible. We should not have to risk our professional status, our reputation or our livelihood because the law lags behind community needs.

I would like to finish with a very personal statement. There are very real and palpable rewards in the work I do. I believe that when I perform an abortion on a teenage girl and help her into a counselling program which will lead her to a better understanding of who she is and where she is going that this is good medicine. One such patient is now a pre-medical student. The same is true of birth control. As for my sex education classes, hear this: Five years after the first sexuality course was held at our church I received a message from one of the mothers saying that "I have another kid coming along. When are you giving the next course?" I said, "Why do you ask?" and the mother answered "My 23 year old son has never forgotten the first course you gave and he has mentioned it from year to year and I want the next one to benefit too." This kind of feedback lets me know that what I am doing is on the right track.

In all of these concerns there will remain much that is intangible. Much that we do as professionals will satisfy us only in the feeling that we are doing what we believe to be right. This is good medicine good humanity, and worthy of your serious consideration as professionals and parents.

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ENVIRONMENTAL INFLUENCES UPON TIME OF ARRIVAL AT PUBERTY

(Concluded from page 273)

- maturity at adolescence. *Develop Med Child Neurol* 10:388-48, Jun 68
- ¹⁶McNeill D, Livson N: Maturation rate and body build in women. *Child Develop* 34:25-32, Mar 63
- ¹⁷Boutourline Young H: *Body Composition, Culture and Sex. Human Body Composition*. Oxford, Pergamon Press, 1965. Pp. 139-59
- ¹⁸Bayley N, Pinneau SR: Tables for predicting adult height from skeletal age: revised for use with the Greulich-Pyle hand standards. *J Pediat* 40: 423-41, Apr 52 (erratum corrected in *J Pediat* 41:371, Sep 52)
- ¹⁹Bayley N, et al.: Attempt to suppress excessive growth in girls by estrogen treatment: statistical evaluation. *J Clin Endocr* 22:1127-29, Nov 62
- ²⁰Prader A: Colloquium longitudinal growth studies XIII. International Congress of Pediatrics, Vienna, Sep 71
- ²¹Boutourline Young H: Colloquium longitudinal growth studies XIII. International Congress of Pediatrics, Vienna, Sep 71
- ²²Livson N, McNeill D: The accuracy of recalled age of menarche. *Hum Biol* 34:218-21, Sep 62
- ²³Scott JA: Report on the heights and weights (and other measurements) of school pupils in the county of London in 1959. London, County Council, 1961
- ²⁴Valsik JA: The seasonable rhythm of menarche: a review. *Hum Biol* 37:75-90, May 65
- ²⁵Stukovsky R, Valsik JA, Bulai-Stirbu M: Family size and menarchal age in Constanza, Roumania. *Hum Biol* 39:277-83, Sep 67
- ²⁶Mills CA: Climatic effects on growth and development with particular reference to the effects of tropical residence. *Amer Anthropol* 44:1-14, 1942
- ²⁷Eveleth PB: Eruption of permanent dentition and menarche of American children living in the tropics. *Hum Biol* 38:60-70, Feb 66
- ²⁸Ellis RWB: Age of puberty in the tropics. *Brit Med J* 1:85-9, 14 Jan 50
- ²⁹Ito PK: Comparative biometrical study of physique of Japanese women born and reared under different environments. *Hum Biol* 14:279-351, Sep 42
- ³⁰Buck C, Stavrakys K: The relationship between age at menarche and age at marriage among child-bearing women. *Hum Biol* 39:93-102, May 67
- ³¹Shock NW: The effect of menarche on basal physiological function in girls. *Am J Physiol* 139:288-92, Jun 43
- ³²Shock NW: Physiological responses of adolescence to exercise. *Texas Rep Biol Med* 4:368-86, Fall 46
- ³³Boutourline Young H, Boutourline Young E: Alveolar carbon dioxide levels in pregnant, parturient and lactating subjects. *J obst gynaec Brit Empire* 63:509-28, Aug 56
- ³⁴Vanjan FR, et al.: The normal range of gastric acidity from youth to old age. *Arch Int Med* 49: 345-59, Mar 62
- ³⁵Greulich WW, Pyle SI: *Radiographic Atlas of Skeletal Development of the Hand and Wrist*. Stanford, California, Stanford University Press, 1950
- ³⁶Tanner JM, Whitehouse RH: Standards for Skeletal Maturity, Part I. Paris, International Children's Centre, 1959
- ³⁷Tanner JM, et al.: A New System for Estimating Skeletal Maturity from the Hand and Wrist with

Standards Derived from a Study of 2600 Healthy British Children. Part 2, The Scoring System. Paris, International Children's Centre, 1962

- ³⁸Bloom BS: *Stability and Change in Human Characteristics*. New York, Wiley, John & Sons, Inc., 1964
- ³⁹Masland RP Jr, et al.: Some comments on acne vulgaris in adolescents. *J Pediat* 49:680-4, Dec 56
- ⁴⁰Gallagher JR: *Medical Care of the Adolescent*. New York, Appleton-Century-Crofts, 1960
- ⁴¹Tanner JM, Whitehouse RH: The Harpenden skin fold caliper. *Am J Phys Anthropol* 13:743-6, Dec 55
- ⁴²Slataper FJ: Age norms of refraction and vision. *Arch Ophthal n.s.* 43:466-81, Mar 50
- ⁴³Gardiner PA: The relation of myopia to growth. *Lancet* 1:476-9, 6 Mar 54
- ⁴⁴Mussen PH, Jones JC: Self conceptions, motivations, and interpersonal attitudes of late- and early-maturing boys. *Child Develop* 28:243-56, Jun 57
- ⁴⁵Mussen PH, Boutourline Young H: Relationships between rate of physical maturing and personality among boys of Italian descent. *Vita Hum* 7:186-200, 1964
- ⁴⁶Iliff A, Lee VA: Pulse rate, respiratory rate, and body temperature of children between two months and 18 years of age. *Child Develop* 23:237-45, Dec 52



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(Concluded from page 264)

But progress was made. Immunizations heralded the onset of preventative medicine; the discovery of insulin by Banting and Best pointed the way towards an ever increasing ability both to prevent and to treat the diseases which could be so beautifully diagnosed and described. Yet, despite these inroads, therapeutics itself as a major discipline is probably no more than 35 years old. One has

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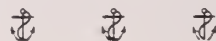
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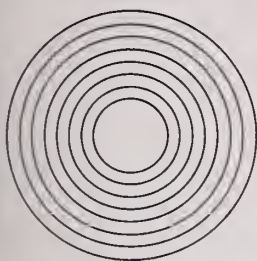
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Roger Williams left Massachusetts to found the Providence Plantation, because he was dissatisfied with what existed where he was, and came to seek something new. In a way it is fitting that a symposium of this kind be held in the hospital that bears his name. For the very essence of therapy is the ever-present search for better things, things which in themselves have value, not for their intrinsic presence, but for their ability to prevent, help, and ameliorate human suffering and disease.

¹Garland JG: Richard Cannon Eley 1901-1971. *N Engl J Med* 284:1439-40, 24 Jun 71





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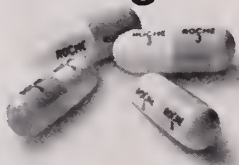
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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruption, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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August 1973
Vol. 56, No. 8

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Some people develop excessive psychic tension and need your counseling



and a few may need counseling
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While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their pre-disposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Rhode Island Medical Journal

AUGUST, 1973

Volume 56, No. 8

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COVER: "Ode to Summer:" welded steel sculpture by Arthur B. Kern, M.D., displayed in the open sculpture show at the Newport Art Association.

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Warnings: Use during pregnancy is to be avoided.

Precautions: 1. Starvation Ketosis: This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of rel-

atively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. **Lactic Acidosis:** This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. **Hypoglycemia:** Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-E (6/72)

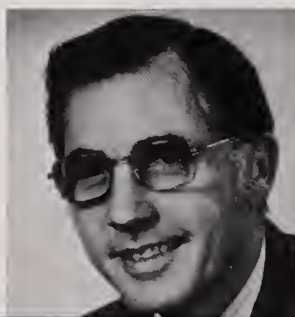
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"Prescription drugs – who should determine the maker?"

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Pharmaceutical
Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say: "In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 25

uld be an obligation of medical
ctice...

"Medical societies ought to con-
t continuing campaigns to point
the substantial savings that could
realized thru deductible insurance
protection for catastrophic ill-
s. At the very least, they should, in
patients' interest, question the
etics of any insurance organization
t raises health care costs by forc-
policyholders to buy insurance
y may not need or want and prob-
y won't ever use.

"Too many doctors are indiffer-
to the economic consequences of
ir decisions. Too many, for ex-
ple, habitually hospitalize patients
the convenience of the MD. It's
sense to deny such habits exist...

"Doctors, thru their medical so-
ies, have unhesitatingly appealed
their patients for support in the
t against government interference
the private practice of medicine.
the public in the past has re-
nded. It's time the American Med-
c Association and state and local
ical societies paid off the debt by
isive action to hold down the cost
medical care."

Cost of Drugs

Insurance rates and hospital
arges are only two factors in health

30 drugs that he selects to treat the
majority of conditions encountered in
practice. Moreover, the physi-
cian's choice of a specific brand is
based on his knowledge of the pa-
tient's medical history and current
condition, and his experiences with
particular manufacturer's
product.

Some substitution proponents
have argued that the dispensing of a
prescription is a simple two-party
transaction between the pharmacist
and the patient, and that a substitut-
ion pharmacist may avoid even a
technical breach of contract by simply
informing the patient that he is making
substitution. I would judge that
the courts would be sympathetic
toward a pharmacist who substituted
without physician approval and who
undertook a legal defense that seeks
to make the patient responsible for
the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are
suggesting to the consumer, and par-
ticularly the consumer activist, that
reduced prescription prices could
follow legalization of substitution.
I have seen absolutely no evidence
to justify this claim. To the contrary,
experience in Alberta, Canada, where
substitution is authorized, suggests

care costs. The cost of drugs—both
prescription and nonprescription—is
another.

And when it comes to drug
costs, the nation's pharmacists are
concerned. Through their national
professional society, the American
Pharmaceutical Association, pharma-
cists are advising the public to use
nonprescription medication cau-
tiously and conservatively, and to seek
the advice of their pharmacist before
selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware
that when it comes to prescription
drugs, often he has an even greater
opportunity to reduce the cost to the
patient—with no sacrifice in the qual-
ity of the medication dispensed. But
in many states, outdated and anti-
quated laws prevent the pharmacist
from engaging in drug product selec-
tion. "Drug product selection" simply
means that the pharmacist functions
in the patient's interest by con-
sciously choosing, from the multiple
brands available, a low-cost quality
brand of the specific drug to be dis-
pensed in response to the physician's
prescription order.

Much *misinformation* has been
purposely spread by those who stand
to gain financially by maintaining

the opposite.

Many pharmacists understand-
ably are concerned about the cost of
maintaining multiple stocks of similar
products. While there is no doubt that
inventory costs rise when additional
brands are stocked, it would be inter-
esting to know how much they rise,
and how many pharmacists actually
stock *all* brands—of, say, ampicillin
or tetracycline—or how long they
keep "slow moving" products on their
shelves before they are returned for
credit. To ask that the industry elimi-
nate multiple sources is to ask com-
petitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would
favor "corner cutting" pharmacists
and manufacturers. For them, free
substitution would be not a right, but
a license. As an aftermath, it is quite
likely that the confidence of both ph-
ysicians and patients in the profession
of Pharmacy would be eroded, as
revelations about the unconscionable
behavior of an undisciplined few were
magnified in the press or in profes-
sional circles.

Summary

In short, what the American
Pharmaceutical Association advo-

high drug costs to the public. An end-
less stream of propaganda has ema-
nated from the drug industry in an
effort to persuade the medical profes-
sion that these so-called anti-substitu-
tion laws should be retained. And as
long as these laws are retained, the
drug industry will continue its current
marketing practices which contribute
unnecessarily to high drug costs to
patients. These practices also are in-
viting government agencies to expand
their restrictive controls on physi-
cians and pharmacists.

APhA Efforts

As pharmacists, we are con-
cerned about health care costs. We
hope that every physician shares our
concern on this vital issue, and will
give his personal support to the con-
structive efforts APhA has undertaken
in the interest of all patients.

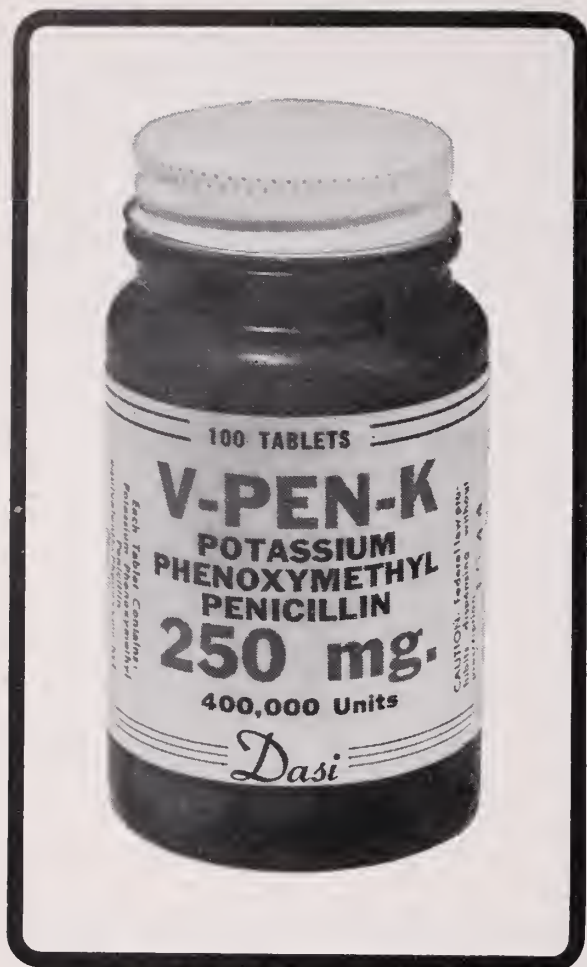
(For a complete discussion of
drug product selection, you are invited
to request a free copy of the "White
Paper on the Pharmacist's Role in
Product Selection" from: American
Pharmaceutical Association,
2215 Constitution Avenue, N.W.,
Washington, D.C. 20037.)

cates as a broad-spectrum panacea
looks to us to be not only a minority
view (advocacy of substitution is by
no means a uniform policy in Phar-
macy), but also an extraordinarily
costly and ineffective remedy, whose
side effects are odious. We believe
(1) that an impressive majority of
pharmacists prefer to work with
Medicine and with industry, for the
consumer, and for the general good,
(2) that they seek the privilege to sub-
stitute when the patient might gain
and when the patient's doctor agrees,
and (3) that they seek to work for the
resolution of genuine grievances
openly and professionally.

(For amplification of PMA views,
please write for our booklet, "The
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Who Shall Determine the Source?"
It is available from: Pharmaceutical
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Book Reviews

THE CASE FOR AMERICAN MEDICINE, a Realistic Look at Our Health Care System by Harry Schwartz. New York, David McKay Company, Inc., 1972

A current advertisement for the magazine *SCIENTIFIC AMERICAN* is emblazoned with this heading: "It's nice to know America leads the world in medical research. Just *don't* get sick." It goes on to say: "Unfortunately a tragic gap separates what we can do from what we *are* doing Three years ago the situation was critical. This year it is intolerable. Next year it will be worse." To learn more about this scandalous situation you are urged, of course, to read the *SCIENTIFIC AMERICAN*. This is but another in the spate of crisis literature concerning the state of medicine in America. A number of books on the subject, ranging from the objective to the discouragingly biased, have been reviewed in these columns. Magazines and the press regularly carry articles on the subject, some accurate, but many more sensational. The television networks (both CBS and NBC) have broadcast programs which have purported to be objective journalism, but have in fact been slanted and often wildly sensational.

It is a great pleasure, therefore, to be able to commend a well-written book on the present status of American medicine which is at the same time fair and favorable. The author, a regular contributor to and a member of the Editorial Board of the *NEW YORK TIMES*, has academic credentials as an economist (Ph.D. and currently professor in the State University of New York) and is furthermore an authority on Russia, which knowledge he uses to advantage in comparing the two systems of medical care and practice.

This rather slender but amazingly fact-filled book is, he states, "an attempt to tell the other side of the story, to help turn the national discussion of medical care delivery into more of a debate and less of a dreary repetition of inaccurate clichés." Two main techniques, he points out, are employed by the most extreme critics of American medicine. "One is to collect a number of case histories about individuals who have allegedly been mistreated, bankrupted, or victimized by American medicine, and then to present this collection of unrepresentative horror stories as the essential truth about this nation's medical system (shades of Ted Kennedy, CBS, and NBC) An al-

ternative technique is to set up a utopian picture of what medical care might be like in some perfect world dreamed up by a writer of science fiction, and then to list the ways in which the reality of American medicine differs from it". American medicine, he believes, may well perform below par, and deserves severe criticism in certain aspects. "But to recognize that American medicine is composed of fallible human beings and has inadequacies in need of remedy is a far cry from the stereotyped claim that we are in a 'health care crisis' of such magnitude that only the most radical surgery will set matters aright." Despite a dire prediction that America "stands now on the brink of chaos" (FORTUNE MAGAZINE), the "brink", states the author, has not been crossed.

Any radical change, he believes, must be examined with an eye to the possible damage it can do to the many areas of excellence in American medical care as well to possible gain in areas of deficiency.

A recent study from the Kaiser-Permanente San Francisco outpatient pharmacy points up the large role in the total spectrum of ambulatory care played by drugs for pain relief, sedation, and tranquilization, along with an iron supplement and a decongestant, suggesting "that a substantial percentage of ailments for which these prescriptions were written were minor self-limiting or purely imaginary." "They hardly seem like illnesses about which it would be worth exerting great passion," concludes the author.

According to the WASHINGTON POST of December 26, 1970, "By all measures, Americans are less healthy now than they were 20 years ago." If that statement were true, he states, it would be the most damning indictment possible of the American Medical System. But it is simply wrong: "The improved health of the American people has been a basic factor making possible this country's increasing population and rise in average longevity. These gains in turn have helped create contemporary concern about over-population."

Life expectancy in the United States, one of the bases for a much abused cliché, has increased progressively and steadily from 59.7 years in 1930 to 71.1 years in 1971. The most impressive gain was made by non-white females — 19 years between 1930 and 1967. The concept that environmental and socioeconomic factors are more important than access to medical care is reinforced by a recent Public Health Service study emphasizing the growing importance as causes of death of such

disorders as lung cancer, cirrhosis of the liver, homicide, suicide, and automobile accidents.

Another frequently cited index of medical care in the United States is infant mortality. In 1930 64 and 6/10 of every 1000 live births died before the end of the first year. By 1950 the rate had dropped to 29.2 and by 1972 to 18.6. In the same period the mortality for non-whites dropped from 44.5 to 29.0. The saving in babies between 1950 and 1970 totalled no less than 145,000. Furthermore there was no apparent geographical correlation between the infant mortality and the physician-population ratio. In fact, such factors as poverty, education, and life-style appeared to correlate much more closely. The same disparity in infant mortality between regions of varying socioeconomic background seemed to prevail in both Russia and Britain, countries vastly different from the United States in both geography and culture. The reduction in infant mortality in the United States between 1960 and 1970 (25 per cent) was roughly the same as that of most industrialized nations. The author concludes: "The argument that it is somehow only the deficiencies of the private practice of medicine that explain this coun-

(Continued on next page)

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try's rank in the infant mortality sweepstakes can seem persuasive only to the statistically unsophisticated."

The drop in mortality from most of the killers — diarrhea, measles, diphtheria, whooping cough, dysentery, tuberculosis, pneumonia, polio, and typhoid fever — has been downright spectacular.

What is not accepted apparently, he points out, is the fact that all human beings are mortal and that medicine can hope only to prolong life some finite period. Millions who, in an earlier era, would have died of tuberculosis, pneumonia, small pox, or other infectious diseases are now saved to die of heart disease, cancer, and stroke. He continues: "To improve health and longevity further the primary need is for more knowledge to cure presently incurable diseases, for individual life styles and life patterns that will prevent the self-inflicted injuries and deaths that are now so prevalent, and for radical improvement in the material conditions of the most deprived groups of Americans."

The history of Medicare and Medicaid, he points out, is a classic example of what happens when government acts without really understanding what

it is doing, or what its impact will be. The sudden infusion of billions of dollars promptly pushed up prices of every element of health care. Since politicians dislike admitting mistakes, scapegoats had to be found. The politicians, press, and media began denouncing the "greedy" doctors and the "grossly inefficient" hospitals.

He further points out the fallacy of comparing physicians' fees only with the Consumer Price Index. If comparisons are made with labor wages and salaries, the doctors do not suffer by comparison. While physicians' fees between 1965 and 1970 rose from 88.3 to 121.4 (based on a 1967 index of 100), the increases for several union groups (e.g. building trades 88.4 to 123.6 and truck drivers 91.2 to 122.5, among others) were roughly the same. As to the essential policy decision on national health insurance, caution must be exercised to avoid bedevilment of the medical system and society as a whole by the adoption of a broad and seemingly generous, but basically unwise plan.

Regarding the political realities of the genuine crisis areas in American society, the author is eloquent. He states: "The senile elderly in mental hospitals are not the only people in American society whose medical needs are neglected." Retarded and emotionally ill children are also the frequent victims of inadequate care. "With these and other genuine crisis areas in American medicine so desperately in need of resources, why should elderly Americans who can afford to pay small and moderate medical bills have these bills paid for by the government? The cynical will say that most old people who stand to benefit from Medicare can and do vote, while the senile elderly and retarded children cannot vote."

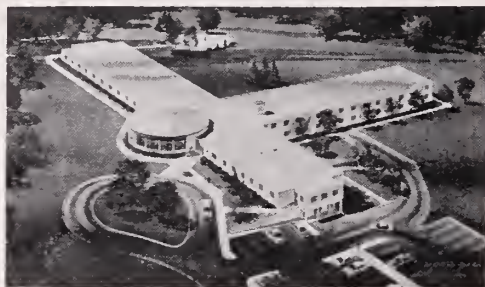
He is troubled by the conventional wisdom that preventive medicine and HMOs will save money: "There is no vast body of knowledge about how to prevent disease lying unused and available for application by a nationwide network of HMOs." Regarding HMOs and bed utilization, he points out that "almost all the prepaid group practice experience to date has been with carefully selected groups whose members enjoy better than average health." "To extrapolate Kaiser-Permanente experience," he continues, "is an elementary statistical error." Why does Kaiser-Permanente continually strive to expand? The answer to this question given by a Kaiser-Permanente planner was: "As long as we keep expanding, our patient population

(Continued on page 307)

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BOOK REVIEWS

(Continued from page 306)

won't get too old. If we remain static, our average patient's age will get older and older and then we'll be in trouble economically." The record further shows that Kaiser-Permanente is not immune to the inflationary pressures affecting the health care industry in general. Plan rates have increased progressively since 1957, the most recent increase of 18 per cent having been instituted in 1971.

Nor are HMOs free of bureaucratic defects and irritations. A Kaiser-Permanente patient may have to wait up to four months to see some specialists. Another well-known group, Health Insurance Plan of Greater New York (HIP), has had recent serious financial difficulties, which have been well publicized. Its fiscal integrity has been drastically impaired, and the quality of service provided, characterized by overcrowding and long waits, has been a source of much criticism. In 1972 it requested a 36 per cent increase in premiums, of which 29 per cent was actually granted. Regarding the HIP multiphasic screening program, it was emphasized at a hearing that in addition to its being costly there was "by no means a closed case that the multiphasic screening approach has significantly greater benefits than more traditional diagnostic services." Present prepaid groups, furthermore, have a record of trying to avoid enrolling too many individuals whose care is certain to be expensive. "They do this," the author points out, "either by restricting enrollment to groups or by requiring a medical examination for individuals wishing to enroll separately and rejecting those in bad health."

The long hospital waits in Great Britain and the rebirth of private practice there are now well recognized. Furthermore, the British National Health Service thus far clearly has not "eradicated differences in length of life or infant mortality based on socioeconomic differences." "Even in the socialized British medical system," he concludes, "the upper and middle classes live longer and their infant children die less frequently than the poorest groups in the population."

In Sweden, which is often pointed to as a shining example, the medical system is overloaded, with waits of up to two years for nonemergency operations, long waits in clinics, and refusal to hospitalize in some cases even very sick patients. A Stockholm newspaper speaks of the "health care crisis" in Sweden! The author recalls that he could not believe his ears when one informant said,

"Don't get sick in Sweden!" Why then does Sweden rank so high in international health comparisons? Sweden is a small, prosperous, homogeneous society without the depths of poverty found in American ghettos. The harsh climate has produced a genetically strong ethnic strain. The drunken driving laws are among the most stringent in the world. There is much out-of-doors living and exercise. These are but some of the more obvious differences from the American experience.

The author generally takes a dim view of the Kennedy-Griffiths bill and other crash programs.

(Continued on next page)

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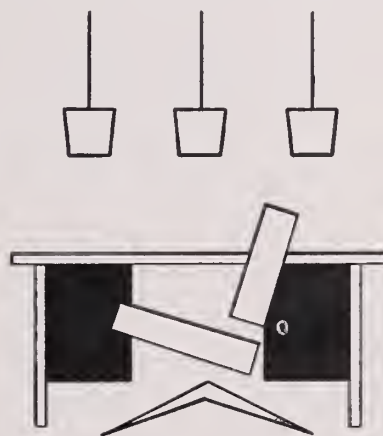
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"One would suppose," he states, "that legislators would have learned from the unsatisfactory results of so many recent past disappointments."

He concludes his well documented discourse with this cogent statement:

"If the reader had hoped to find here simple, easy answers for a medical utopia, he will be disappointed. There are no utopias in real life and the improvements we make are soon devalued by rising expectations and new demands. Yet the American medical system — pluralistic, complex, and everchanging — has served the American people well. It can continue to do so if the aim of change is to increase the choices of both health care providers and those who need their help. Those who would collectivize American medicine to satisfy their ideological preferences would have cause to regret the result when they themselves required medical care for serious illness."

This excellent book can be recommended without reservation.

SEEBERT J. GOLDOWSKY, M.D.

* * *

THE PARENTS' GUIDE TO DRUGS by Matthew Andrews. Dolphin Books, Doubleday & Company, Inc., Garden City, N.Y., 1972. \$2.50

The author is a journalist and ex drug addict. He divides his book into four parts: Part I, Drugs and Your Child; Part II, The Environment; Part III, Therapy; Part IV, The Parent.

The drugs discussed are marijuana, amphetamines and stimulants, barbiturates and other depressants, heroin, the hallucinogenic drugs (LSD, mescaline, psilocybin), and last, glue and the industrial chemicals. Each of the drugs is discussed under headings of history; packaging, preparation and price; use; ambience; and symptoms. The book is straightforward with a minimum of irrelevant padding, particularly in the treatment of the drugs themselves. This is in line with current thinking of getting away from the concept of "good" drugs and "bad" drugs and thinking of them in terms of their societal determinance and problems.

In the Environment section the author discusses the importance of the school, the influence of the street, and the effect of laws in shaping attitudes toward the drugs. Two points that the author makes regarding the home should be stressed. He states "that to believe that enforced police action and rigid legal restrictions will eradicate the problem is simply wishful thinking" and "to expect the schools to educate your youngster in such a way

that he or she will never be tempted to turn to the use of drugs is really unreasonable." In the section on School, he considers what goes on in the colleges, high schools, and grade schools, but it is more a recital of programs than any suggestions toward content or evaluation of their efficiency. There is a growing feeling, as pointed out in the Shafer Report, that drug education programs may, in effect, be counter-productive. As this reviewer once wrote, the lecturer on marijuana is faced with a difficult decision, for, if he outlines the medical and psychological proven facts as we know them, he is likely to lose his job, but on the other hand if he follows the scare technique in talking about it he will undoubtedly lose his audience. Section II of the Ford Foundation Report on "Drugs of Abuse" speaks to the great problem of "drug education" and cites a study done by Zinberg, a well known figure in the field of drug education. He was speaking to a high school group in Massachusetts in which an attitude survey toward marijuana was taken before and after his talk. Before his talk some 60 per cent felt that they would never use marijuana, but after his talk the figure had fallen into the 30 per cent range.

The influence of the "street" is unfortunately very pervasive and all too often is the province of societal dropouts whose problems relating to drugs are only a small part of their spectrum of difficulties.

The law is presently in such a state of flux, with various recommendations and counter recommendations being made, that it is hard to assess it.

The section on Therapy discusses the role of the public hospitals, the private clinic, psychiatric individual therapy, and encounter or group therapy. This is very brief and well done.

The section on the Parent, subtitled "What To Do", discusses the role of the community, effective research into community planning, and community response. The author stresses that parents must maintain pressure on legislators to implement conclusions of governmental studies and reports.

There is a compilation of terms which presumably may be of value to some people. A rather complete listing of organizations follows having to do with drug education including national drug education organizations, professional groups, and societies and the federal agencies. Also included is a state-by-state listing of facilities with their addresses and telephone numbers, which to Rhode

(Continued on next page)

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Island residents is somewhat outdated and incomplete particularly in view of the new directory published by the Committee on Drug Abuse of the Rhode Island State Medical Society.

Regrettably, Mr. Andrews feels either that alcohol is not a drug or that it poses no problem for young people, since no mention of it is made in the book.

The recently released "Shafer Report" is strongly recommended to all seriously interested in the use of drugs. It is by far the best work published to date either by government or private sources.

ROSWELL D. JOHNSON, M.D.

* * *

THE NEW CHASTITY AND OTHER ARGUMENTS AGAINST WOMEN'S LIBERATION
by Midge Decter. New York, Coward-McCann & Geoghegan, Inc., 1972

Controversy arises from a disagreement on premises, or by faulty logical reasoning to the conclusion based on a common premise. No issue in modern times is more confused than the matter of women's liberation because of errors in the sequence of logical deductions and the unrecognized disagreement on premises.

Before engaging in Mrs. Decter's arguments it is best that this reviewer set forth his premises and clearly state his logical arguments. In all areas of civil rights, economic rights, and equal opportunity, the premise is that sex should not be discriminatory; the logical conclusion is that in all areas where there is inequity of opportunity or inequity of reward for equal performance it must be corrected. With respect to equal opportunity, however, the premise must be precisely defined; the lists must be open to all entries regardless of sex; however, it does not say that where because of sex there are differences in performance that one must guarantee to the loser the rewards usually reserved for the winner. There are distinct biological differences in behavior in the two sexes which are both neurologically and hormonally based. The following premises are subject to debate since analogous arguments based on unsound physiological reasoning have led to similar conclusions in the past. In the 19th century because of the mere act of menstruation a woman was considered to be weak during her menstrual cycle, and incapable of holding certain jobs because of this "cyclic weakness". This obviously is a physiological error since bleeding every four weeks has not been shown really to affect woman's physical performance. My own premise from behavioral

studies is that there is much more variability in the affective side of a woman's behavior; this affects interpersonal relationships. Imprinting of clearcut 21 day cycling is totally abolished by the presence of testosterone in the neonatal period, and hence males do not possess the feature. Psychological and physiological studies correlate well in indicating that there are deeper swings in the affective states; the prerogative of the woman to cry, to be depressed, and to require tenderness is more an historical fact than fictional invention. Similarly, aggression, dominance, and fighting behavior in primates have a high degree of correlation with the male endocrine system and its imprinting.

There are competitive advantages to both the female and the male patterns of emotional behavior. The only logical conclusion to be drawn from these observed physiological findings is that, given equal opportunities, one cannot legislate equal achievements; in the gray areas where hormonal and behavioral imprinting is not marked, there can be great overlapping. It is in this gray area where the typical male behavior pattern is not clearcut, nor is the female behavior pattern clearcut where the differences in biological behavior patterns are not clearly seen, and where differences may be said not to exist. Thus is some instances some women clearly can perform in the male behavior pattern in a competitive manner, and the male may be adaptive to female behavior in a realistic way. But as in all arguments, conclusions based on exceptions and atypicality should not be used to generalize on the properties of the generic entities being considered.

There are two other premises in this reviewer's arguments which must be accepted before his conclusions are deemed valid. The first is that both the male and female have been endowed biologically with a drive to perpetuate the species. In the human species, as in all primates and in most sub-primates, the nature of the act of procreation assumes an aggressive role on the part of the male, and a passive role on the part of the female. The aggressive force in the male, which incidentally is suggested but not proven in individuals possessing an extra Y chromosome, leads to insemination, even by force. No amount of aggression on the part of the female, without passivity in accepting penetration, can lead to the sex act. It is a simple statement of fact that an aggressive female cannot rape a passive male. If without further dalli-

(Continued on page 337)

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(Concluded on page 339)

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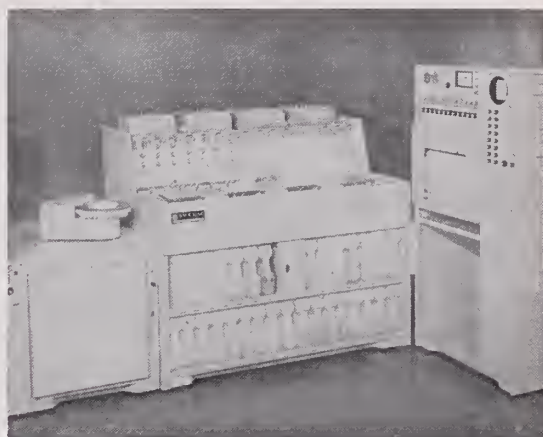
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Peripatetics

The staff of the Rhode Island Medical Society greeted with delight RAUL NODARSE and Mrs. Nodarse at their recent visit to the Library. Doctor Nodarse expressed his great pleasure in his visit and said that he had made an excellent recovery from recent injuries sustained in an accident, in New York City. WELCOME BACK, DOCTOR NODARSE!

* * *

JOSEPH M. ZUCKER has been appointed a Life Fellow of the American Psychiatric Association. Doctor Zucker is a member of the Mental Health Committee of the Medical Society.

* * *

ROBERT D. COLI of Warwick and JANIS GAILITIS of Newport have been made Fellows of The American College of Physicians (ACP).

* * *

The following slate of officers for 1973-74 has been nominated for the Rhode Island Chapter of the American College of Surgeons: President, DAVID M. BARRY; Vice President, HENRY T. RANDALL; Secretary-Treasurer, PAUL J. M. HEALEY. Councilors for three year terms, MARTIN E. FELDER, J. DOUGLAS NISBET, WILLIAM KLUTZ.

Councilors for two year terms, WILLIAM F. GARRAHAN, FIORINDO A. SIMEONE, WILLIAM R. THOMPSON.

Councilors for one year, JACK SAVRAN, THOMAS F. HEAD, LEONARD S. STAUDINGER, JR.

The nominating committee consisted of CARL V. ANDERSON, MARTIN E. FELDER and JACK SAVRAN.

* * *

RHODE ISLAND medicine was well represented at the Regional Conference on the Professional Standards Review Organization (PSRO), sponsored by the AMA recently in Boston. In attendance were: ROBERT V. LEWIS, immediate past president of the Society and an incorporator of R. I. PSRO, Inc., SEEBERT J. GOLDOWSKY, editor of this Journal, and medical director of Blue Cross-Blue Shield, HERBERT P. CONSTANTINE, director of Ambulatory medicine at Rhode Island Hospital, TIM NORBECK, executive secretary of the Society and his assistant, TED LYNCH.

* * *

EDWIN N. FORMAN has been appointed to the committee on neoplastic diseases of the American Academy of Pediatrics. The committee reviews studies of malignant diseases in childhood and plans to prepare an authoritative reference manual on the subject.

* * *

A. A. SAVASTANO was the subject of a Frank Lanning sketch in the July 31st Providence Evening Bulletin in which Doctor Savastano was lauded for his initiation of the Post Graduate Conference on the Medical Aspects of Sports sponsored by the University of Rhode Island and the Medical Society. Referring to the Conference, the sketch said, "It was not only the brainchild of Doctor Savastano but at the outset he carried it singlehandedly, financially, administratively and otherwise ... and he has developed it into what is acknowledged to be the best symposium of its kind in the United States."

The newspaper also stated that "he has received many citations and each honor intensifies his his gratitude to America, but many of the honors came because he has so freely dispensed his time, ability, and affluence for the benefit of others."

* * *

MARIO G. BALDINI has been appointed Chief of the Department of Medicine at the Memorial Hospital, Pawtucket. He succeeds MYRON STEIN

RHODE ISLAND MEDICAL JOURNAL

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who has accepted the position of chief of pulmonary division at the Cedar-Sinai Hospital and professor of medicine at the University of California in Los Angeles.

* * *

DANIEL S. LIANG, Division of Urology of St. Joseph's Medical Staff, has authored a book on "Facts About Aging".

* * *

SIDNEY COBB has been named head of the psychiatric epidemiology research unit at Butler Hospital. He has also been named professor of psychiatry (Research) for the Brown University Division of Biological and Medical Sciences, human behaviour section.

* * *

ROBERT J. WESTLAKE has been appointed Butler Hospital's director of outpatient care, and associate professor of psychiatry (clinical) at Brown.

* * *

GEORGE W. KRIEBEL, JR. has been appointed instructor in psychiatry (clinical) at Brown University and has joined Butler's staff as intensive treatment chief.

* * *

JAMES McGUIRE has joined Butler Hospital's psychiatric staff as a new full time member.

* * *

MICHAEL E. SCALA will spend three months in Indonesia at the request of Care-Medico. He will teach and demonstrate procedures in orthopedic surgery. He will also teach at the Medical School of Maylasia. Mrs. Scala will accompany her husband and will teach Occupational Therapy.

* * *

DANIEL HARROP, Kent County Medical Examiner for more than 10 years, has resigned. FRANK J. JEHLE, JR. is the new Medical Examiner for that county.

* * *

ARVIN S. GLICKSMAN, professor of radiotherapy at the Mount Sinai School of Medicine in New York, has been appointed physician-in-chief in the Department of Radiation Therapy at Rhode Island Hospital. Doctor Glicksman has also been named a Professor of Medical Science at the Brown University Medical School.

* * *

ELLIOT B. BARRON has been appointed by Governor Noel to serve on the State Parole Board. Doctor Barron succeeded THOMAS L. GREASON who resigned.

* * *

STANLEY M. ARONSON, Pathologist-in-Chief and Director of Laboratory Medicine at The Miriam Hospital, and Dean of Medical Affairs at Brown University Medical School, was invited by H.E.W. Secretary Elliot L. Richardson to serve on the National Advisory Commission for Multiple Sclerosis.

* * *

ROBERT P. DAVIS, Physician-in-Chief of The Miriam Hospital, was Chairman of the Intersociety Session on "Membranes and Transport" at the 57th Annual Meeting of the Federation of American Societies for Experimental Biology.

* * *

CAROL SILVER was the guest speaker for the Fall River Medical Society recently. He spoke on "Medical and Surgical Treatment of the Temporomandibular Joint Dysfunction".

* * *

MELVIN HOFFMAN was re-elected to serve as President of The Miriam Hospital Medical Staff Association at the Association's annual meeting held recently. Also re-elected to serve for a period of one year were MARTIN E. FELDER, Vice President, and HENRY M. LITCHMAN, Secretary. HENRY F. IZEMAN was elected to serve as Treasurer.

(Concluded on page 340)

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Prospects For Hereditary Disease Control

Exquisite Interaction Of Genetic And Environmental Factors Suggests Role For Identification Of Genetic Predisposition In Amelioration Of All Disease

By Alfred G. Knudson, Jr., M.D., Ph.D.

Progress in the control of disease has tapered off following many successes in the conquest of infectious and nutritional diseases. Present problems may be placed into three broad groups: (1) residual problems in areas of previous success, (2) new environmental hazards such as cigarette smoking and air pollution, and (3) constitutional disorders, many of genetic origin. The last of these poses a serious challenge to scientific medicine and is the subject I shall discuss with you now.

What are these problems of constitutional origin? A list includes such common entities as diabetes mellitus, schizophrenia, essential hypertension, and allergy, and such rare ones as galactosemia, phenylketonuria and hemophilia. For a medical geneticist a more meaningful classification is one based on genetic mechanism, as shown in Table 1. The first genetic class, chromosomal abnormalities, is exemplified by the Down syndrome. The second, Mendelian conditions, includes all of the inborn errors of metabolism. Polygenic disorders such as diabetes mellitus, schizophrenia, and essential hypertension comprise the third. Finally, there is a group of genetic disorders of somatic

cells which includes cancer and, possibly, autoimmune disorders.

MECHANISMS OF CONTROL

Assessment of prospects for control of these hereditary conditions begins with a summary of available means for dealing with them (Table 2). A simple example of definitive correction is that of *surgery* for cleft palate or pyloric stenosis. *Circumvention* of metabolic defects is accomplished by elimination of specific metabolites from the diet in galactosemia and phenylketonuria and by addition of a crucial product in adrenal hyperplasia

TABLE 1
Genetic Classification of Disease

Class	Example
Chromosomal	Down's Syndrome
Mendelian	Inborn errors of metabolism
Polygenic	Hypertension, schizophrenia
Somatic genetic	Cancer

TABLE 2

Classes of Treatment of Hereditary Diseases	
Class	Example
Surgery	Cleft palate, pyloric stenosis
Circumvention	Galactosemia, adrenal hyperplasia
Drug administration	Wilson's disease
Restoration	Methylmalonic acidemia
Induction	Bilirubin conjugation defect
Replacement	Hemophilia, agammaglobulinemia
Modification	Allergy, autoimmune disease
Transplantation	Sickle cell anemia, polycystic disease

(Continued on next page)

ALFRED G. KNUDSON, JR., M.D., Ph.D., of Houston, Texas, Dean, The University of Texas; Graduate School of Biomedical Sciences at Houston.

Delivered at The Miriam Hospital, Providence, Rhode Island, January 15, 1973.

and inborn errors of thyroxine synthesis. Penicillamine treatment of Wilson's disease is an example of *drug administration*. Partial restoration of enzyme activity is possible in a few instances by means of cofactor supplementation, e.g., with pyridoxine in some cases of homocystinuria and with vitamin B₁₂ in some cases of methylmalonic acidemia. Yet another approach is *induction* of enzyme. An example of this is provided by bilirubin conjugation defect, in which jaundice results from failure to eliminate bilirubin. The enzyme is evidently present in a defective form and activity is not completely lost. Stimulation of enzyme synthesis by phenobarbital causes a substantial increase in the defective enzyme, to the point where enough activity accumulates to reduce jaundice clinically. *Replacement* of defective protein has been practiced for many years in hemophilia and more recently in certain immune deficiency diseases. Administration of purified enzyme has been attempted in Fabry's disease and Tay-Sachs disease, but with disappointing results. Plasma and leukocyte infusions have been reported to cause improvement in some patients with mucopolysaccharidoses, but these results are very preliminary. *Modification* of protein synthesis is illustrated by desensitization of allergic individuals. A final kind of treatment is cell, tissue, or organ *transplantation*. This is accomplished when blood transfusion is given for sickle cell anemia and when kidney transplantation is utilized for polycystic disease of the kidneys.

Despite some successes treatment of inborn errors is on the whole still very limited. It is understandable then that much attention has been devoted to the prevention of hereditary disease. The most direct prevention is provided by genetic counseling and voluntary infertility. For dominantly inherited disorders this is particularly useful, since nearly all gene carriers are affected, although the issue is complicated by the fact that a significant fraction of affected persons results from new mutation. For recessive conditions most of the mutant genes are present in unaffected heterozygous individuals who must be identified before any really significant diminution in homozygotes can occur.

A different approach to prevention is that of amniocentesis and induced abortion. It has now been amply demonstrated that diagnosis of many chromosomal abnormalities and inborn errors of metabolism can be accomplished by amniocentesis. So far the risks of the procedure to mother and child appear to be small and it becomes conceiv-

able that all pregnancies could be monitored for chromosome abnormality. Since nearly three million babies are born each year in the United States, considerable facilities and technical help would be required. The extensive efforts being expended on automating karyotype analysis may facilitate attainment of this goal.

No approach to treatment or prevention mentioned so far involves change in an existing gene. But there are some discoveries in lower organisms which suggest that this may some day be possible. One of these is transformation (Figure 1). This process was originally described by Griffith in *Pneumococcus*. Organisms of one capsular specificity could be stably transformed into those of a second specificity by a principle extracted from the latter. This transforming principle was shown by Avery and coworkers to be DNA, and in fact this discovery provided the first evidence that DNA is genetic material. Transformation has been attempted in mammalian cells but is not yet a feasible procedure. In order for transformation to be clinically useful, even if it could be accomplished in mammalian cells, it would be desirable to administer only the DNA which specifies the desired genetic function. The extracted DNA in the original experiments presumably represented all of the bacterial DNA and was therefore not confined to that which constituted the gene in question. Now there is a new approach to this aspect of the problem, utilizing the reverse transcriptase discovered by Temin and Baltimore. This enzyme catalyzes the synthesis of homologous DNA from an RNA template. If the messenger RNA from which a specific protein is translated can be isolated even in small amounts, large amounts of the homologous DNA could be synthesized *in vitro*. Then there would be the problem of getting the DNA into the appropriate target cell without its destruction. A possible approach to this has been provided by Aposhian's finding that the coat of an animal tumor virus, polyoma, can be made to enclose DNA from mouse embryoma cells and deliver this DNA to human cells. It remains to be demonstrated whether this DNA can be integrated into the host's chromosome and made to function.

TRANSDUCTION

Another example of induced gene change is the process of *transduction* (Figure 2), first discovered by Zinder and Lederberg in *Salmonella*. Transduction involves the transport of a gene from one cell to another by a virus, a bacteriophage in the

Figure 1

Transformation

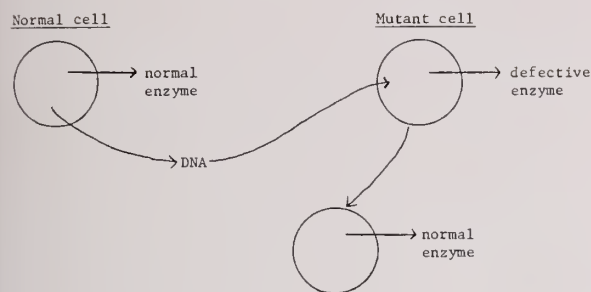


Figure 2

Transduction

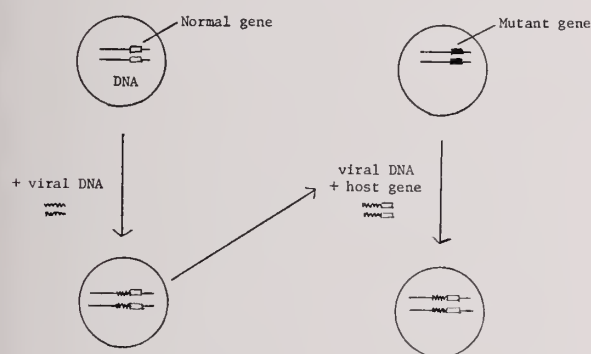
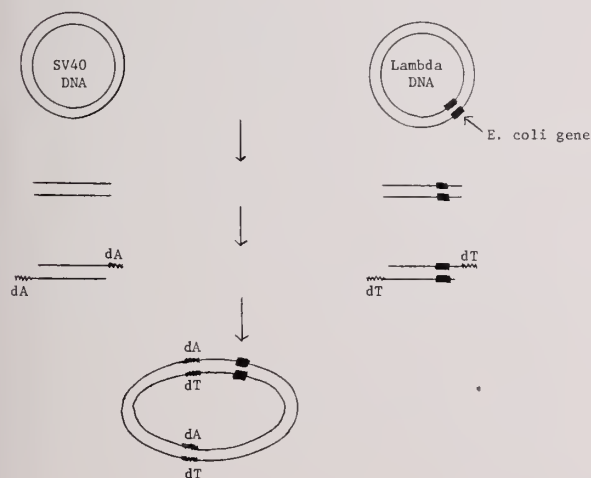


Figure 3

A made-to-order virus



case of bacteria. In some instances numerous genes are transferred and the process is relatively non-specific; in others, as with the transduction of galactose genes of *E. coli* by the bacteriophage lambda, it is specific. Transduction has not been demonstrated in animal cells, but the crucial property of integration of viral DNA into host cell DNA is a property of tumor viruses. A completely unexpected result has been reported by Merrill, who found that human galactosemic cells acquired the missing enzymatic activity following infection with lambda bacteriophage carrying the corresponding *E. coli* galactose gene. Another report which suggests transduction might be attainable is that of Rogers concerning a sibship of three children lacking the enzyme arginase. Observing that the rabbit papilloma tumor virus has an associated arginase activity and causes reduction of blood arginine levels in man, Rogers provided the German physicians of the children with the virus. Preliminary data show a marked lowering of blood ammonia levels. Whether this experiment, which is still in progress, represents true transduction has not been demonstrated.

There are other problems posed by transduction. One of these is the requirement for combining the appropriate gene with a useful virus. A recent report by Berg and coworkers offers a potentially powerful tool (Figure 3). These investigators have utilized a series of enzymes to modify DNA from two different sources, lambda and the animal tumor virus SV-40, and to join them artificially into a single circular DNA duplex. This paves the way for the artificial union of DNA from an appropriate gene with DNA from an appropriate carrier virus.

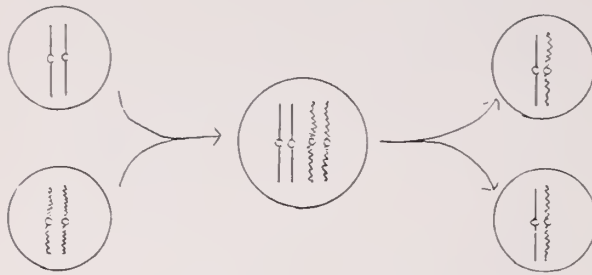
A more serious problem posed by transduction is that it involves integration of viral DNA into host cell DNA and that all animal viruses which integrate in this way are able to produce tumors. Optimistically we may hope that the viral activity which accounts for oncogenesis can be separated from the activities associated with integration and transduction. Pessimistically it may develop that a gene for one of the latter processes is a gene for tumor formation.

CELL HYBRIDIZATION

So much for transformation and transduction. A rather different approach to induced genetic change is that of cell hybridization (Figure 4). Harris' discovery that irradiated Sendai virus in-

Figure 4

Cell hybridization



duces fusion of animal cells has stimulated extensive investigations. The fused cells can segregate into cells with new combinations of the chromosomes of the two parental cells or the fused cell may progressively eliminate chromosomes. Utilizing mouse-human hybrid cells, Mary Weiss has held investigations which have revolutionized the mapping of genes on specific human chromosomes. Harris and Klein have shown that hybrids of tumor and nontumor cells behave like non-tumor cells, but, as these hybrids progressively eliminate chromosomes, they become tumor cells. Harris's group has also been able to insert genes from chicken cells into mouse cells, a procedure which comes closer to genetic engineering. Whether this technology of cell hybridization can ever be used therapeutically will depend on whether the process can be controlled so malignant cells do not emerge, whether rejection of introduced material can be avoided, and whether selection of desirable hybrids can be accomplished.

Transformation, transduction, cell hybridization — these are three presently conceivable ways to achieve gene change which might be therapeutically useful. But even if they can be made to work they present problems. First, there is the matter of time of administration. If a hereditary disease is already irreversibly present at birth, it is obvious that any therapy would have to be prenatal. This is probably the case for most chromosomal abnormalities and for some Mendelian disorders. For conditions like galactosemia, treatment must be started early in life but can be instituted postnatally. Then there is the matter of tissue specificity. It must be ascertained that the particular treatment visualized would have an effect in the tissue which manifests the disease. In many dis-

eases, such as lipid and mucopolysaccharide storage diseases, several systems of the body, including the nervous system, are affected even clinically; for them the target of gene therapy would be very large. In others, such as some glycogen storage diseases, several defects in amino acid metabolism, and the glycolytic defects of erythrocytes, only one or two tissues are affected.

Assuming that time of treatment and tissue specificity are not insurmountable, there still remains the problem of quantitative requirement upon gene therapy. What level of enzyme activity would be necessary to correct an inborn error? The fact that heterozygotes with 50 per cent of normal activity are clinically normal places an immediate upper limit. For almost all known human enzymopathies the homozygote's level is below 15 per cent. For several inborn errors there is evidence that quantitative differences of enzyme levels are related to the spectrum of clinical findings. It is quite possible that an increase to 110 per cent of normal would result in improvement while an increase of 10-20 per cent might be curative for most inborn errors.

Finally, I want to reiterate the possible hazards of gene therapy. Transduction and integration of viral genome may lead to cancer. Even the recipient might not be the only person to be considered, since he could serve as a focus of infection of others. For transformation a similar circumstance could ensue. Cell hybridization may not be without hazard too if karyotypic instability turns out to be a feature of the process.

All of these procedures could lead to gene therapy. I emphasize that they are mentioned as approaches to treatment of serious disease. I do not advocate extension of possible successes to measures for "improving" mankind; I do not advocate employing these strategies to introduce "desirable" characters into healthy persons. I should mention two procedures which have received wide notice and which by their nature would not only be useful to prevent hereditary disease but would invite use for production of people according to formula. One of these is *cloning*, which has been made conceivable by Gurdon's demonstration that nuclei of adult frog cells can replace nuclei of fertilized eggs and promote normal embryogenesis. If this were to be demonstrable with human cells we could imagine a series of genetically identical individuals all derived from eggs with nuclei from one adult individual selected for some set of desirable traits.

Another approach to regulation of embryogenesis would be the control of fertilization, especially if done *in vitro*, as accomplished by Edwards for mouse embryos. Here one could presumably control the choice of germ cells to be used and additionally monitor the results for aberration. I do not intend to dwell upon these approaches to genetic control because it is immediately apparent that choice of "good" and "bad" genes presents problems of another magnitude compared with those involved in disease-producing genes. Even in the latter instances there are problems. For example, is the hemoglobin S gene "good" or "bad" in areas afflicted with falciparum malaria? Or, as Neel has suggested, the genes for diabetes mellitus might protect against starvation.

PROSPECTS FOR PREVENTION AND TREATMENT

Now that we have looked at general technical prospects for prevention and treatment of hereditary disease, I would like to return to a review of the genetic categories presented earlier, weighing the promise of various technical approaches to each. Conservation of the chromosomal abnormalities leads immediately to the conclusion that the demands upon any form of therapy are severe — treatment would need to be instituted prenatally, it would need to affect many tissues, and it would need to be quantitatively efficient. On the other hand prenatal diagnosis and abortion are at least in the realm of possibility as presently understood, even granting the technical problems of monitoring a large population of pregnant women, the needed assurance of safety, and the ethics of terminating fetal life. At stake, however, is the total elimination of one disease, Down's syndrome, that affects about 4,000 new babies each year in the United States.

I stress amniocentesis and abortion because no means for preventing births of children with chromosomal abnormality has been proposed. There is little or no understanding of the primary cause of the disorders. The subjects born with them certainly represent only a small fraction of the total abnormal conceptuses, since 30-40 per cent of all spontaneous abortuses are chromosomally abnormal; this represents about 5 per cent of all pregnancies, and the figure may be much higher. So it appears that chromosomally abnormal births may be a residual effect of some basic biological processes with high inherent failure rates about which we may never be able to do much.

Mendelian disorders are much more heterogeneous than chromosomal abnormalities. Severe domi-

nant conditions are very rare because so few individuals survive to reproduce. Specific mutations remain in a population because of recurrent mutation. For achondroplasia and osteogenesis imperfecta approximately 75 per cent of all cases have normal parents and are attributable to new mutation; genetic counseling and voluntary infertility would reduce these diseases to 75 per cent of their present incidences. In order to eliminate this majority of cases prenatal diagnosis and abortion could be considered. Unfortunately at present there is no means for diagnosing such subjects prenatally.

Many Mendelian recessive conditions are metabolic errors which do not become irreversible until after birth. These have been the main targets of treatment to date and of discussion of possible future gene therapy, as outlined above. Most of these conditions are also probably rare because they are held in populations by recurrent mutation. But here most of the mutant genes are in unaffected heterozygous carriers, and only a tiny fraction of the genes in a population represents new mutations. This means that nearly all cases will be the offspring of two carriers. Therefore any means for carrier identification could permit disease prevention, either by voluntary infertility or by abortion of prenatally diagnosed fetuses.

X-linked recessive disorders such as hemophilia are more of a problem since only two-thirds of the abnormal X-chromosomes are in unaffected carrier females. New mutations therefore play a major role, and it has been estimated that as many as 20 per cent of affected males have non-carrier mothers. There would be no way to anticipate these cases except by prenatal diagnosis. This can be accomplished for the important and very severe Lesch-Nyhan syndrome.

A few hereditary diseases, such as cystic fibrosis and sickle cell anemia, are much more common because they are maintained not by recurrent mutation but rather by selective advantage of the heterozygous carrier. These diseases could be reduced in frequency if the advantage were no longer operating. This is certainly the case for sickle cell anemia, since the advantage of the carrier against falciparum malaria does not operate in the United States. But the time scale is large; for sickle cell anemia the disease incidence would become one-half its present value in about 200 years if no case reproduced and if carriers reproduced normally. On the other hand the disease could be eliminated in 50 years if no carrier repro-

(Continued on next page)

duced at all, a course which is certainly not acceptable at present. More acceptable perhaps would be a program of voluntary infertility of matings of two carriers, or, if prenatal diagnosis can be developed, of induced abortion of affected fetuses.

POLYGENIC DISORDERS

By far the most numerous hereditary diseases are those which involve causation by interaction of two or more genes, the polygenic disorders. Altogether the disorders discussed so far affect something like one per cent of individuals born in the United States. In contrast each of diabetes mellitus, schizophrenia, and essential hypertension affects more than that number.

Genetic analyses of these common diseases have been conducted for many years, and major controversy has raged over monogenic versus polygenic inheritance. The prevalent current opinion is that all three are polygenically determined. In a way this is a disappointment; we can no longer expect to find a single molecular defect where circumvention would be curative. On the other hand the number of genetic loci might be relatively small, say three or four, and affecting even one of them might be beneficial. If that were so, we should not abandon the direct approaches considered for Mendelian disorders.

Certainly the significance and scope of polygenic disorders is great, but measures for their prevention are not available. In fact, the concept of prevention is very limited for most common diseases, perhaps because too much attention has been paid to the ubiquitous environment and not enough to genetic individuality. We also have no satisfactory means for identifying the susceptible individual until he has preclinical manifestations, such as prediabetic or labile hypertensive state.

Treatment on the other hand has fared much better. Some measures are available for most of these diseases although they are often life-long, as with diabetes mellitus, and not curative. Treatment of diabetes has combined attempts to modify an environmental factor — the diet — as well as the individual's physiology. A similar example is offered by the combination of environmental avoidance and desensitization procedures recommended for allergic persons. Still there is nothing like a specific genetic therapy so far. That type of therapy depends not only upon a new methodology as required for monogenic disorders but also upon identification of the specific gene functions which are abnormal in the common diseases.

Some hope for progress on this latter point stems

from the fact that for some common disorders there are uncommon monogenic variants which may be related to the mysterious polygenes. For example, a rare monogenic form of atherosclerosis is familial hypercholesteremia, a dominant disorder with a characteristic lipoprotein anomaly and high blood cholesterol. This one form, even though uncommon, may shed light on the common forms of atherosclerosis. Another example is gout. For years it has been thought that at least many cases of gout result from overproduction of uric acid, but there had been no known mechanism. A new insight was provided by the X-linked Lesch-Nyhan syndrome in which deficiency of salvage enzyme leads to failure of appropriate negative feedback at the controlling step in purine synthesis.

If then some individual polygenes could be identified, gene therapy could be considered. The problems of tissue specificity and efficiency would probably be similar to those encountered with inborn errors of metabolism. However, since some means of treatment are available and since the disorders in general are not so life-threatening as are the inborn metabolic errors, evaluation of the advisability of such therapy requires careful consideration. Particular attention should be paid to the hazards of such therapy, both to the individual and to those around him. It would hardly be, for example, a reasonable trade-off to substitute transducing virus-induced cancer for treatable gout.

SOMATIC GENETIC DISEASE

Finally there is the category of somatic genetic disease. The most likely example of this phenomenon is cancer, although the autoimmune disorders may constitute another example. The evidence that somatic mutation plays a role in oncogenesis will not be discussed here. Suffice it to say that recent studies on physical, chemical, and viral carcinogens increasingly point to mediation of their oncogenic effects via change in the host's genome. Further support comes from the study of dominantly inherited tumors and tumor syndromes as special cases in which change in the host cell genome is inherited via germinal cells rather than by somatic mutation.

These examples of dominantly inherited susceptibility to cancer may be combined with some recessive syndromes (xeroderma pigmentosum, Fanconi and Bloom syndromes, immune deficiency states) to constitute a class of genetically predisposed individuals. Many of these individuals develop cancer even in childhood, and when they

(Concluded on page 340)

Vibrio Parahemolyticus In Narragansett Bay

Rhode Island Waters Harbor Potentially Pathogenic Organism Transmitted By Sea-foods

By Fredy P. Roland, M.D.

The role of the sea as a source of foodstuffs and recreational areas is increasing in importance.

The sea and the foodstuff from the sea are usually thought of as being polluted by man. Wastes and oil are willfully or accidentally spilled into the sea. Considerable amounts of research have been done on the estuarine waters. The survival of pathogenic bacteria and viruses of human origin in salt water has been investigated in depth. Always forgotten are the pathogenic microorganisms of sea-water origin and the diseases they cause in marine animals that are themselves transmissible to man.

Among the microbial diseases having a marine

FREDY P. ROLAND, M.D., of Providence, Rhode Island, Assistant Professor of Medicine (Clinical), Division of Biological and Medical Sciences, Brown University, Providence, Rhode Island; Microbiologist, Consultant for Infectious Diseases, The Memorial Hospital, Pawtucket, Rhode Island.

With the assistance of MISS JOYCE MARTIN, M.T. (ASCP) and MISS LINDA PIETRAS, M.T. (ASCP).

Presented on John F. Kenney Research Day at The Memorial Hospital, Pawtucket, Rhode Island, on November 8, 1972.

origin, only one is capable of being transmitted to human subjects.¹ *Vibrio parahemolyticus*, a strict halophilic vibrio, has recently increased in importance as a pathogen in the United States, causing gastroenteritis and skin infections. This vibrio is part of the marine environment, and its recovery from practically all estuarine waters in the United States is now a recognized fact. It differs from other microorganisms responsible for gastroenteritis in that they are merely passively transmitted by shellfish.

LITERATURE

Smith remarked that in three books of clinical microbiology published in 1970 *Vibrio parahemolyticus* is referred to only by a cursory remark or a chart entry. The same author puts forward the concept that *V. parahemolyticus* is perhaps the major cause of diarrhea and gastroenteritis in many countries. It is not a "new organism", but is little known despite its considerable importance.² Knowledge of this organism has not been widely disseminated among clinical microbiologists.³ It is believed that the majority of clinicians are not aware of the possible pathogenicity of this vibrio.

CASE

The isolation of *V. parahemolyticus* from the
(Continued on next page)

TABLE I
Vibrio parahemolyticus
Gram negative rods, polarly monotrichous; lactose,
negative; oxidase and starch positive.

	Type I V. parahemolyticus	Type II V. alginolyticus
Voges-Proskauer	—	+
NaCl 10 per cent	—	+
Sucrose	—	+

TABLE II
Vibrio parahemolyticus in Sea-food

	Clams Oysters	Crabs	Shrimp	Swordfish
VP per Gram of Sea-food	500-71,000	7-1,500	700-3,000	400-1,200
Sea-water (liters)	20	100		
Filtered (hours)	24	24		
—18° C.			8 days 1,000/shrimp	
Survival				
0° C. 15 days				
22° C. 30 days				
Heat				
60-80° C.			15 minutes	
pH			pH 6	

skin of the leg of a patient who developed endotoxin shock, intravascular coagulation, and gangrene resulting in above-the-knee amputation of one leg^{4, 5} prompted us to review the literature dealing with the pathogenicity of the vibrio and its importance in the seafood industry in the United States, and also to investigate its incidence in Narragansett Bay (Rhode Island).

THE ORGANISM

Vibrio parahemolyticus (VP) is a group of enteropathogenic, salt-dependent bacteria.⁶ The group has been divided into two species, VP type I and a sucrose-positive variant VP type II or *Vibrio alginolyticus*. They are gram-negative, rod shaped, pleomorphic bacilli. They do not ferment lactose, but do hydrolyze starch and are oxidase positive. The two species are separated by their ability to grow in 10 per cent NaCl, by their fermentation of sucrose, and by the Voges-Proskauer test (Table I).

They are closely related to *Vibrio comma*, the organism responsible for cholera.

VP is responsible for cases of gastroenteritis and skin infection. The enteritis resembles shigellosis with watery stools containing blood and mucus.² Usually the stools do not harbor the normal *E. coli* and associated flora. Localized skin and tissue

infections may follow marine bathing.⁵ The pathogenicity of the two species is not clear-cut. They may be enteropathogens with an altered route of entry or nonpathogenic vibrios with a previously unsuspected virulence.⁷

Because of their isolation in coastal waters and the occurrence of epidemics in the United States, an evaluation of their potentiality as pathogens in association with sea-foods is useful. The unexplained cases of gastroenteritis and skin lesions occurring on the litoral during the summer months must be brought to the attention of physicians.

VP is present in sea-foods. In Japan, where the organisms have been studied for 20 years, gastroenteritis following the ingestion of raw, dried, salted fishes is frequent.² In the United States they have been isolated from sea-water, sediment, crabs, oysters, shrimp, and clams,^{3, 8, 9-13} (Table II). Their survival is dependent upon numerous factors, including temperature, refrigeration, freezing, acidity of the environment (pH), and concentration of NaCl.^{11, 14, 15} Another important factor as far as food contamination is concerned is that, given the proper environment (salinity, alkalinity), VP has probably the shortest generation time of all bacteria, nine to 11 minutes (this compared to a generation time of 20 minutes for *E. Coli*²). Counting of VP organisms¹⁶ is important because the severity of the symptoms appears to be related to the number of VP organisms ingested.¹⁸

In Japan in 1951, 272 patients had VP gastroenteritis with 20 deaths. In 1963 there were 524 isolated outbreaks resulting in 12,000 infections; in 1964, 558 outbreaks with more than 14,000 infections with a death incidence of about 10 in each year. They caused 60 to 70 per cent of the summer diarrheas.²

It was stated in 1970 that VP "may account for many cases of gastroenteritis of undetermined etiology in this country."⁴ Since then three major epidemics have been reported in the United States (Table III) — in Washington State in 1969 due to clams,⁸ in Maryland in 1871 due to crabs,¹⁷ and in Louisiana in 1972 due to shrimp.¹⁸ A small epidemic in 1972 in New Jersey was traced to shrimp and crabs.¹⁹

RHODE ISLAND WATERS

Because of the extensive use of Narragansett Bay as a source of sea-food and bathing, the incidence of VP was determined. Isolation of VP was undertaken during the months of June and

July 1972. A total of 75 samples were taken, concentrating on swimming beaches and areas where there is clamming. Sea-water and sediment for transportation were incorporated in a trypticase-salted, soy broth to give a final concentration of 7 per cent NaCl. As no counting was done, refrigeration was not strict during transportation to the laboratory. The mixture was plated on solid media containing trypticase soy agar, NaCl 3 per cent, and potato starch 0.5 per cent. All organisms that hydrolyzed starch and were oxidase positive were further identified. Of 75 samples, 48 were positive for VP type II. Type I was found in two places: at Oakland Beach and in the Barrington River (map).

VP is found with high frequency during the summer, but not in the winter months.²⁰ The most important ecological factor is temperature. VP cannot grow at temperatures below 5° C. It has been postulated that VP survives the winter months in the plankton. They can be located on the plankton organisms or within the organisms comprising the plankton. The other ecological factors, pH, salinity, and light, are much less important than

INCIDENCE OF VIBRIO PARAHEMOLYTICUS IN NARRAGANSETT BAY

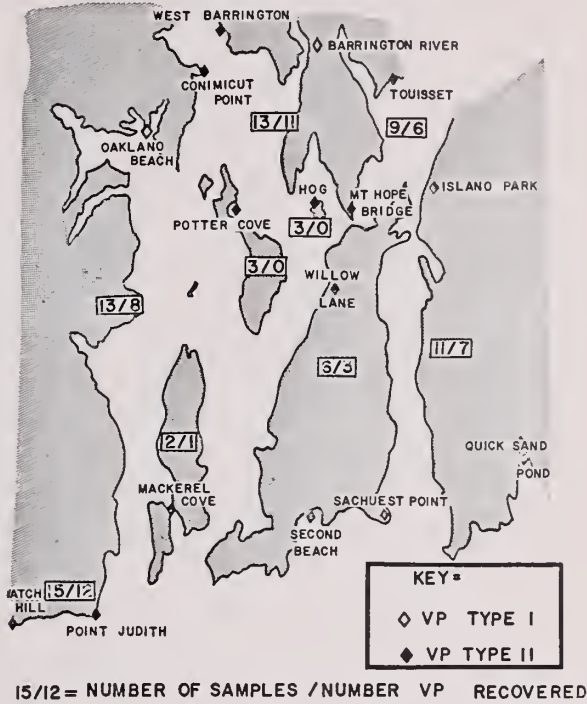


TABLE III
Vibrio parahaemolyticus Gastroenteritis in the United States

	1969 Washington	1971 Maryland	1972 Louisiana	1972 New Jersey
Persons	?	320	600	15
Food	Clams	Crabs	Shrimp	Shrimp Crabs
Preparation	Raw	Steamed Transported under uncooked crabs	Boiled 5-6 hours prior Ambient temperature	Cooked? Then put in raw crabs container
Incubation	16-8 hours	8-22 hours	5-92 hours	12-15 hours
Illness		1-5 days	1-8 days	14 hours-3 days
Medical Attention		60%	50%	80%
		Diarrhea 98% Cramps 78% Nausea 76% Vomiting 74% Fever 26% Chills 10%	Menu Shrimp Crackers Ketchup Hot Sauce Beer Soda Drinks	
			Shrimp Eaten <10 10 to 20 >20	Attack Rate 27.3% 66.7% 73.0%

(Continued on next page)

waters, in inshore sediments, and in molluscan shellfish.^{2, 10, 12} High organic nutrient content is favorable to the growth of VP.¹²

CONCLUSIONS

The knowledge that sea-food can be contaminated with VP should be disseminated throughout the United States. VP is distinguished from all other pathogenic bacteria by its ability to grow and survive in the sea. Because it invades marine animals, it constitutes a potential human health problem.⁹ This potential exists in the United States as proven by the outbreaks reported in the last four years.¹⁴ The more important problems in food safety relate to bacteria.²³ We still do not know what constitutes an acceptable level of VP organisms in sea-foods. Many of the cases of food poisoning in the United States and other countries are of unknown etiology.²⁴ A broader awareness in this country of the enteropathogenic potential of marine vibrios should prompt investigators to look for these organisms.⁸

Specific tests in suspected outbreaks of shellfish-related gastroenteritis for the detection of VP in stools, sea-food, sea-water, and skin lesions should be included in addition to the routine bacteriological procedures.^{2, 12, 24} The real extent of the hazards of VP infections can be evaluated only when public health officials recognize that the organisms exist as a potential health problem, increase surveillance for the organism, and devise methods to eliminate them if required.¹³

Narragansett Bay isolation of *Vibrio parahemolyticus* should stimulate more studies of these organisms. The extensive use of our beaches and the eating of raw shellfish warrant a closer investigation of cases of gastroenteritis and skin infection of doubtful etiology and a more systematic search for the salt-dependent vibrios in our coastal waters.⁵ Only the microbiologist can furnish the answers and only he can identify the potential pathogenic problems and insure that adequate steps are taken to prevent occurrences.

REFERENCES

- ¹Sinderman CJ: Diseases of marine animals transmissible to man. *Lab Med* 1:50-4, Jan 70
- ²Smith MR: *Vibrio parahemolyticus*. *Clin Med* 78: 22-5, Aug 71
- ³Fishbein M, Mehlman IJ, Pitcher J: Isolation of *Vibrio parahemolyticus* from the processed meat of Chesapeake Bay blue crabs. *App Microbiol* 20: 176-8, Aug 70
- ⁴Roland F: Leg gangrene and endotoxin shock due to *Vibrio parahemolyticus*—an infection acquired in New England coastal waters. *N Eng J Med* 282:1306, 4 June 70
- ⁵Roland F: *Vibrio parahemolyticus*. *Clin Med* 78: 26-33, Aug 71
- ⁶Sakazaki R: Proposal of *Vibrio alginolyticus* for the biotype 2 of *Vibrio parahemolyticus*. *Jap J Med Sci Biol* 21:359-62, Oct 68
- ⁷Twedt RM, Spaulding PL, Hall HE: Morphological, cultural, biochemical, and serological comparison of Japanese strains of *Vibrio parahemolyticus* with related cultures isolated in the United States. *J Bact* 98:511-18, May 69
- ⁸Barker WH Jr, Hooper D, Baross JA: Shellfish-related gastroenteritis. *New Eng J Med* 283:319, 6 Aug 70
- ⁹Krautz GE, Colwell RR, Lovelace E: *Vibrio parahemolyticus* from the blue crab *Callinectes sapidus* in Chesapeake Bay. *Science* 164:1286-1287, Jan 69
- ¹⁰Johnson HC, Baross JA, Liston J: *Vibrio parahemolyticus* and its importance in seafood hygiene. *J Am Vet Med Assoc* 159:1470-73, Dec 71
- ¹¹Vanderzant C, Nickelson R: Survival of *Vibrio parahemolyticus* in shrimp tissue under various environmental conditions. *Appl Microbiol* 23:34-7, Jan 72
- ¹²Baross J, Liston J: Occurrence of *Vibrio parahemolyticus* and related hemolytic vibrios in marine environments of Washington State. *Appl Microbiol* 20:179-86, Aug 70
- ¹³Bartley CH, Slanetz LW: Occurrence of *Vibrio parahemolyticus* in estuarine waters and oysters in New Hampshire. *Appl Microbiol* 21:965-66, May 71
- ¹⁴Covert D, Woodburn M: Relationships of temperature and sodium chloride concentration to the survival of *Vibrio parahemolyticus* in broth and fish homogenate. *Appl Microbiol* 23:321-5, Feb 72
- ¹⁵Lee JS: Inactivation of *Vibrio parahemolyticus* in distilled water. *Appl Microbiol* 23:166-7, Jan 72
- ¹⁶Vanderzant C, Nickelson R: Procedure for isolation and enumeration of *Vibrio parahemolyticus*. *Appl Microbiol* 23:26-33, Jan 72
- ¹⁷CDC Maryland: *Vibrio parahemolyticus* Maryland. *Infect Dis* 2, Apr 72
- ¹⁸CDC Louisiana: *Vibrio parahemolyticus*—Louisiana. *Morbidity and Mortality* 21:341-2, Oct 72
- ¹⁹CDC New Jersey: *Vibrio parahemolyticus*—New Jersey. *Morbidity and Mortality* 21:430, Dec 72
- ²⁰Kaneka T, Colwell RR: Incidence of *Vibrio parahemolyticus* in Chesapeake Bay. *Bacteriol Proc* G203, 71
- ²¹Brisou J: La pollution microbienne, virale et parasitaire des eaux littorales et ses conséquences pour la sante publique. *Bull W H O* 38:79-118, 1968
- ²²Ward BQ: Isolations of organisms related to *Vibrio parahemolyticus* from American estuarine sediments. *Appl Microbiol* 16:543-6, Mar 68
- ²³Bauman HE: Food microbiology. *ASM News* 38: 312-317, Jan 72
- ²⁴Baross J, Liston J: Isolation of *Vibrio parahemolyticus* from the Northwest Pacific. *Nature* 217: 1263-4, Mar 68



New Concepts Of Pathogenic Mechanisms In Allergy

Major Abnormality In Atopy Possibly Genetic Related To Defect In Adrenergic Beta Receptor

By Guy A. Settipane, M.D.

Since Von Pirquet coined¹ the term allergy in 1906, a great deal of progress has been made. At that time Von Pirquet was doing research on serum sickness disease which occurred in some individuals who received horse antipneumoccal polysaccharide serum. Von Pirquet is also credited with discovering the tuberculin test. Perhaps for this reason the term allergy encompasses both the delayed and the more immediate type of allergic reactions. Allergy may be defined today as an altered immunologic state induced by an antigen in which pathological reactions are subsequently elicited by that antigen, or by a structurally similar substance.

HISTORICAL BACKGROUND

The immediate type of allergic reaction is divided

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into two groups: anaphylaxis and atopy. The term anaphylaxis is derived from the Greek *phylaxis*, meaning *protection* and *ana against*. In 1902 Portier and Richet² observed that injections of an extract of sea anemone caused rapid death in dogs previously injected with that extract and designated this type of immediate reaction anaphylaxis. There is no heredity factor in anaphylaxis, and it may be readily induced artificially by injection of foreign proteins and certain haptens. A classic example of anaphylaxis as seen in medical practice is the severe immediate reaction, which sometimes results in death, following injections of penicillin or after a bee sting.³

Atopy, a term introduced by Coca and Cooke in 1923,⁴ is of major interest to allergists and practicing physicians. It includes the following disease states: asthma, allergic rhinitis, and atopic eczema. as contrasted with anaphylaxis, heredity is a major factor in atopy in which spontaneous sensitization to naturally occurring antigens, such as pollens, may be present.^{5, 6, 7} The typical antibody involved is that of reagin or skin sensitizing antibody, which is found in the Immunoglobulin E class⁸⁻¹² of serum proteins. The major part of this report will deal with pathogenic mechanisms of

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asthma and indirectly with allergic rhinitis and atopic eczema.

In the past, theories of the pathogenesis of asthma were generally unsatisfactory. While some types of asthma were undoubtedly related to an antigen-antibody reaction, in others no evidence of an antibody-antigen reaction was apparent. In addition, nonspecific aggravating factors of asthma, such as upper respiratory infections, and anxiety, as well as the apparent relationship of asthma, allergic rhinitis, and atopic eczema, made a unified concept of asthma difficult to develop, until the recent introduction of the Beta Adrenergic Blockade Theory of asthma.

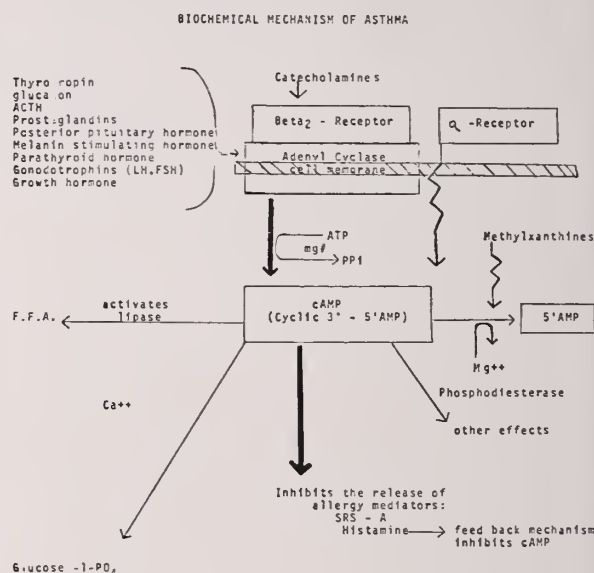
BETA ADRENERGIC THEORY

In October, 1968 Andor Szentivanyi¹³ published in the Journal of Allergy "The Beta Adrenergic Theory of the Atopic Abnormality in Bronchial Asthma". Szentivanyi's theory relied heavily on Sutherland's¹⁴ concept of the "second messenger" mediating many of the effects of a variety of hormones. This second messenger is an intracellular cyclic nucleotide called adenosine 3'5'-monophosphate or cyclic AMP, or more recently cAMP. Adenyl cyclase in the cell wall stimulates the production of cyclic AMP, which is found intracellularly and which is related to the initiation of many peripheral functions of the cell. The relationship of receptors, adenyl cyclase, cAMP, and some of the latter's peripheral response is illustrated in Figure 1. The interaction of the adrenergic system with end organ cellular receptors affects the intracellular concentration of cAMP, which in turn mediates many functional responses. We are thus presented with a possible basic mechanism in the causation of atopy, especially of asthma.

Szentivanyi theorized that a defect in the beta₂ receptor would so alter the delicate intracellular mechanism of metabolism as to be able to account, as an end result, for the signs and symptoms of asthma. The adrenergic system has two major types of receptors, alpha and beta, and stimulation of these receptors may have antagonistic responses. For example stimulation of the alpha receptor to the lungs produces bronchiolar constriction, while stimulation of the beta₂ receptor produces bronchiolar relaxation. The beta₁ receptor does not cause smooth muscle relaxation in the lung and is not thought to be impaired in asthmatics. Drugs that block beta receptors, such as propranolol, aggravate asthmatic conditions, because alpha stimulation, which inhibits intracellular cAMP predominates. This decrease in cAMP level causes indi-

rectly an increased release of allergy mediators, such as histamine and Slow-Reacting-Substance of Anaphylaxis, (SRS-A)¹⁵ and as an end stage causes further constriction of bronchiolar smooth muscle (Figure 1).

Figure 1



In bronchial asthma, a possible mechanism is that of a defective beta₂ receptor (adenyl cyclase), resulting in decreased levels of intracellular cAMP, and increased release of allergic mediators.

As a test of one component of this theory, it was found that asthmatics and some individuals with atopic eczema do not produce as high a level of blood glucose as normal individuals following administration of epinephrine.^{16, 17} In addition, nocturnal urinary levels of cAMP in asthmatics demonstrated significantly lower levels of urinary cAMP than in normal individuals.¹⁸ Both asthma and atopic eczema can be explained on the basis of an abnormal beta receptor (Figure 1). The lipolytic effect of epinephrine in asthmatics is unclear and may not be impaired.

ACTION OF DRUGS

This type of biochemical mechanism in the causation of asthma may also explain why certain drugs are helpful in asthmatics. Aminophyllin compounds inhibit the enzyme phosphodiesterase which breaks down cAMP into an inactive form of 5' AMP. This inhibition enables intracellular cAMP to increase and inhibit the allergic mediators. Other inhibitors of phosphodiesterase are puromycin, benzothiadiazides, reserpine derivatives, and papa-

verine.¹⁹ Epinephrine and isoproterenol are predominately stimulators of beta receptors, which are thought to be on the cell membrane and which may be identical to one site on the adenylyl cyclase. Stimulation of the beta receptor will increase the production of cAMP from ATP, and, again, this will relax bronchiolar smooth muscle and indirectly inhibit the release of allergic mediators.

Other stimulators of adenylyl cyclase are thyroid stimulating hormone, growth hormone, posterior pituitary hormone, leutenizing and follicle stimulating gonadotrophins (LH, FSH), melanin stimulating hormone, parathyroid hormone, glucagon, ACTH and prostaglandins.²⁰ Corticosteroids and thyroxine may actually work by rendering the beta receptor more receptive to stimulation, and corticosteroids also are thought to exert some phosphodiesterase inhibition. Thyroxine has a paradoxical role in that it would appear that this hormone should make asthmatics better by indirectly increasing intracellular cAMP. However, in hyperthyroidism there is also a decreased level of ATP, the precursor of cAMP.²¹⁻²³ Although thyroxine may initially help to stimulate adenylyl cyclase into producing more cAMP from ATP, it is possible that this already low level ATP is further exhausted and the overall result is a decrease in cAMP and worsening of the asthma. In fact, five such cases of hyperthyroidism aggravating an existing asthma have been reported.²⁴ In short, there probably are separate receptors on adenylyl cyclase for each hormone. For example, blocking the beta receptor will not affect the ACTH receptor site on adenylyl cyclase.

Cyclic guanosine 3'5'-monophosphate (cyclic GMP) is the only cyclic nucleotide other than cAMP which occurs naturally, but its role at this time is uncertain. Both of these cyclic nucleotides have a widespread distribution throughout the animal kingdom.²⁵ Cyclic GMP is less potent in mediating cellular physiology than cyclic AMP. Tissue levels are generally about 10 per cent of those of cAMP, and high concentrations of exogenous cyclic GMP can lead to elevation of cyclic AMP in some tissues, probably by inhibiting phosphodiesterase. Cyclic GMP is metabolized by one or more phosphodiesterases which also will metabolize cAMP.²⁶

OTHER SYNDROMES

The relationship of beta receptors and cAMP may also help to explain the pathogenic mechanism of the Locked Lung Syndrome resulting from the overuse of aerosolized isoproterenol medication.

Isoproterenol is metabolized to 3-methoxyisoproterenol, which has a beta-adrenergic blocking action. This compound accumulates after overuse of aerosolized isoproterenol and thus may aggravate already malfunctioning beta receptors in lung tissues of asthmatics.

In hay fever one may postulate that the shock organ is the nasal mucosal membranes and a decrease in intracellular cAMP in these cells may increase the release of histamine. However, to date no beta receptors have been identified in the nasal mucosal membranes.

Lowell^{27,28, 29} and his group have postulated a nasal mucosal membrane defect which may result in increased permeability in atopic individuals with hay fever. Changes in membrane permeability have been reported to be related to intracellular cAMP levels in lower animals.³⁰ If this finding is found to apply to human mucosal membranes, beta receptors may play an important role. A beta receptor defect in the nasal mucous membranes may be the cause of the increased permeability found in nasal membranes of atopic individuals. Lowell and his group feel that this increased permeability may allow pollens to enter the mucosal membranes and stimulate the immunologic system to produce reagin or skin sensitizing antibody. Reagin has been found in secretions surrounding conjunctival and nasal mucosal membranes.^{31, 32, 33}

Skin sensitizing antibody is not limited only to atopic individuals, since normal subjects may be stimulated to produce reagin. Fisherman³⁴ induced immediate cutaneous reactivity to *Ascaris* antigen in normal subjects by parenteral injections of an *Ascaris* extract. Fisher and Connell³⁵ induced an immediate type of reactivity to ragweed pollen in a normal subject with a previous negative reactivity by injecting ragweed extract emulsified in mineral oil adjuvant. It is possible that a defect in the mucous membrane barrier may allow inhaled pollen to stimulate the immunological system into producing significant quantities of reagin or skin sensitizing antibody. A defective beta receptor in nasal membranes may also aggravate hay fever by reducing local intracellular cAMP and increasing the release of allergic mediators such as histamine.

OTHER STUDIES

Our recent studies on bee sting allergy in boy scouts is consistent with this theory of a defective mucosal membrane.³⁶ The frequency of bee sting allergy was found to be about the same in atopic and normal segments of the same population of

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boy scouts. In bee sting allergy the antigen is injected subcutaneously, thus circumventing the defective nasal mucosal membranes. Since the rest of the immunological system is thought to be the same in atopic and normal individuals, there is no reason why bee sting allergy should localize in atopic individuals, especially if the main pathology lies in mucosal membranes.

Postulating of a defective β_2 receptor mechanism in the skin of atopic eczema patients is mostly theoretical at this point except for indirect evidence that DNA synthesis in the epidermis is inhibited by the addition to skin tissue cultures of drugs that are primarily β_2 receptor stimulators, such as isoproterenol.³⁷ In atopic eczema, there is a thickened skin layer with an increased cellular mitosis, a finding consistent with a defective β_2 receptor.

In addition, Parker and Eisen³⁸ have recently reported that there was a decrease in cAMP response in leukocytes of atopic eczema patients after *in vitro* stimulation with isoproterenol as compared to leukocytes from normal individuals. This finding may explain the relative decrease in hyperglycemia found after epinephrine injections in asthmatics and atopic eczema subjects. They concluded that the similarity in the leukocyte cAMP responses in bronchial asthma and atopic eczema provide a further link between the two conditions.

Kelly and White³⁹ have uncovered an important inhibitory feedback mechanism involving histamine. Their studies showed that exogenous histamine increases intracellular cAMP and markedly inhibits endogenous histamine release. It is not known whether exogenous histamine accomplishes this increase in cAMP through stimulation of β receptors. This inhibitory feedback mechanism of histamine controls the intensity of the inflammatory response and may explain why the wheal and flare reactions, which are in part due to histamine release, usually do not cascade throughout the body but remain localized at the point of contact with the antigen, such as is found in the immediate type of allergy skin tests.

Austin's group⁴⁰ have found that the cholinergic nervous system is also involved indirectly in the pathogenesis of bronchospasm in asthmatics as shown by atropine reversal of bronchospasm induced by propranolol⁴¹ or by the atropine reversal of bronchospasm induced by inhalation of specific pollens in sensitized individuals. In addition, aerosolized Mecholyl,[®] a cholinergic drug, produces

bronchospasm in asthmatics even in those individuals who have been symptom free for several years.⁴² Austin's group has also shown that the combination of cholinergic and α adrenergic stimulants has resulted in additive enhancement of release of allergic mediators such as SRS-A and histamine. Atropine selectively prevented this cholinergic enhancement. However, cholinergic drugs alone did not change cAMP levels and appeared to work indirectly through pharmacological stimulators of the α receptors.

PROSTAGLANDINS

One of the substances released during experimental anaphylaxis has been found to be prostaglandins (PG), mainly PGE_2 , but with some PGF_2 .⁴³ Prostaglandins are cyclic oxygenated C_{20} fatty acids and are grouped according to the type of chemical function and by the degree of unsaturation. They are divided into the F, E, A and B type.⁴⁴ Biosynthesis of prostaglandins occurs very rapidly. PGE and PGE_2 biological activity is rapidly lost after a single passage through lung tissue.^{45, 46} The role of prostaglandin in allergy is not totally defined as yet, but certain principles appear clear. It has been known that aspirin, which has a blocking property for prostaglandin synthesis, may ameliorate asthma episodes.

Prostaglandin F_2 (PGF_2) is a bronchoconstrictor, while prostaglandin E_2 (PGE_2) is a bronchodilator. The beneficial effect of aspirin on asthma may be a blocking of the synthesis of PGF_2 . Epinephrine, bradykinin, SRS-A, and even mechanical stimulation may lead to release of prostaglandin from tissues. Intradermal injection of either PGE_1 or PGE_2 produces a wheal or flare response similar to that of histamine.⁴³ Lichtenstein, et al.⁴⁷ reported that PGE_1 or PGE_2 cause increased cAMP levels in leukocytes and lymphocytes independent of the β receptor, and this increased cAMP levels may in turn inhibit allergic mediators. However, in some tissues prostaglandins may actually decrease cAMP levels.⁴⁸

Lichtenstein's findings that prostaglandin increases intracellular cAMP, which further inhibits the release of histamine, SRS-A, and prostaglandins, suggest an inhibitory feedback mechanism of prostaglandin similar to that described for histamine.

CONCLUSION

It appears that the major defect in atopic diseases may be a defective β_2 receptor, which may be caused by at least one gene action, pos-
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The Evolving Role Of The American College Of Surgeons In Peer Review And The PSRO Legislation

College Must Be Protector Of The Patient And Coordination For The Mass Of Data That Will Be Accumulated

By George R. Dunlop, M.D., F.A.C.S.

Although there are some 60 Health Maintenance Organizations (HMOs) in the country covering about eight million people and Foundations in at least 40 states, most of us are solo practitioners or practicing in small groups on a fee-for-service basis. Our track record is good. All surveys show that the public like us as individuals if not in organized groups. Through continuing education most of us are giving our patients good medical care. Since 1950 infant mortality has dropped from 29 to 18 per cent. In the same period the life expectancy of the population has risen from 68 to 71 years. We have built more medical schools and trained more doctors. So much new information has been generated in the laboratories that our fund of knowledge can become obsolete in a very few years. We have accepted more self-imposed controls than any other profession in the

nation. We set up Blue Shield Plans all over the country initially to finance only low income groups and now to cover new and growing health needs of the nation, and, finally, as a profession we are well paid.

In spite of this record we find ourselves under constant attack by the media, government, labor, and the public generally. Public polls show that as a group we are felt to be indifferent to the public need. Malpractice suits are increasing in number. As bills are drawn up and legislation passed we see more and more of our prerogatives being taken away from us. We are inundated by red tape and paperwork. The time has now arrived when we must have our every professional act reviewed by our peers, and under the Professional Standards Review Organization (PSRO) legislation the peers will be reviewed by government agencies. We feel pressured and set upon. In desperation a few of our profession have joined unions, thereby surrendering more of their freedoms, feeling that their only recourse is to fight back through the mechanism of a strike.

Now let us attempt to identify the source and cause of some of these pressures that have led us into this situation. Some of you may say that it

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Read at the Annual Meeting of the Rhode Island Chapter of the American College of Surgeons, May 25, 1973.

is because the government wants to take over or that the Blues and the insurance companies have assumed too much responsibility. The list of scapegoats is a long one. I need not remind this audience that without a dictatorship no government can take over medicine without public support. In the long haul it is always the public that calls the tune. Our trouble is that the public is talking to us, but some of our profession are either not listening or are a little deaf.

MEDICAL COSTS

In the first place the public is saying that today medical costs are so high that a major illness would bankrupt 95 per cent of the population and that this fact scares the head of any family household. It is telling us that with taxes, high living costs, and inflation it must carefully budget its expenses at the beginning of each year. It needs to know what its medical costs will be and as the polls have shown is willing to pay an ever bigger premium for paid-in-full programs. It would like to have the program as comprehensive as possible even if it costs more money.

This is understandable and simple enough, but the picture has become far more complicated. To pay for all or part of these premiums a company must take the cash out of the pay envelope and attach the cost of medical care to the product it manufactures. Because of this mechanism the cost of health care of the employee and his family becomes a production cost. The union on the other hand sees mounting health care costs as reducing the residual pot for which they can negotiate. Further, these costs cut down the employee's visible take-home pay.

If the worker pays no part of the premium directly, he feels no restrictions in using his coverage as freely as he feels necessary. Government as an employer pays the premiums for the largest single group of employees in the world numbering some eight million and at the same time is responsible for the cost of an increasing number of health programs provided under the law. Because of this relationship of production costs and taxes to medical care the public has become increasingly sensitive to their escalation and is demanding an increased accountability from the profession.

This then identifies the source of some of the powerful pressures that have been brought to bear on our profession; but what about quality control? we may ask. These pressure groups previously described assume quality control but are demanding better cost control. The profession on the other

hand assumes cost control and concerns itself chiefly with quality control. If our voices are to be heard at all, cost control must be given the highest priority.

Now as government and business look at our system, what do they see? They recognize that it is more convenient and remunerative for physicians to care for their patients in a hospital. They see for the most part that our services do not have to compete in the open market. They see that physicians are reluctant to exert controls on their own hospital colleagues. In fact, they suspect that the more services are rendered in a hospital setting the better for the doctor. They conclude that the system has poor cost control mechanisms. The buyers of medical care on the other hand are told by their consultants that there are health care delivery systems where the physicians share the risk or underwrite the program. This they say is a financial cost control mechanism. Figures are produced which show that in actual practice utilization of services is down in the HMO environment.

The American people have always preferred incentives to controls, and the government has accepted the development of the HMOs as their strategy for two reasons. First, it offers a financial incentive to physicians to keep costs down, and second, such a system may provide competition in the open market.

Unfortunately, there is not time this afternoon to address ourselves to some of the legitimate questions concerning the future of HMOs. Harry Schwartz in his book "The Case for American Medicine" has a good chapter entitled the HMO Illusion.

Let us simply accept the fact that government in going the demonstration route hopes to make a prepaid comprehensive health care system available on an optional basis in another five years.

ROLE OF THE PSRO

In the meantime through the PSROs an elaborate data bank will have to be developed. It is quite possible that figures will be developed and made available to the public at no cost showing how one hospital or area compares with another; summaries of length of stay; information by diagnosis, sex, age, and recipient category; an analysis of the number of certifications, requests for extensions, details of certification, emergency requests, justification for approvals, and denials; and finally the actual length of hospital stay as compared to the certified stay. It would appear that the physician's success with the PSRO will rise

or fall depending on the capacity for data processing.

The question naturally arises as to whether the peer review offered by the growing number of Foundations for Medical Care and the PSROs will furnish the necessary cost controls so that the fee-for-service system can compete in the open market with the HMOs. Can it stand up under the critical scrutiny of the public and ward off the threat of a complete government take over?

Earlier in my remarks I identified the source of some of the pressures on medicine today and implied that they will decrease only as our medical care system can meet the public need. Whereas cost controls have top priority in the public view, the quality of the product they are buying is of equal importance. I refer now to paid-in-full programs. Government, business, labor are all demanding this. The bills in the legislative hopper guarantee it. Although no one doubts the federal government's involvement in financing medical care will continue to increase, there is no doubt that the private sector will continue to bear the burden of most of the financing and most of the administration of delivering health care.

On what will our success depend if the profession is to avoid total bureaucratic control? In the first place we must support paid-in-full programs. The public cannot be expected to pay increasingly high premiums with the fear that they are not adequately covered and that they may receive supplementary bills for unpredictable amounts from the profession. Indemnity programs in their view are evidence of the lack of commitment to meeting their needs. If we cannot give them this they will turn to the government, which will guarantee it.

Next we must make the peer review system work. Senator Wallace Bennett has told us that HEW will conduct its own parallel review while the PSROs are demonstrating their potential capability.

Finally, we should consider ways and means of introducing a financial incentive into our conventional fee-for-service system if we are to compete successfully with the HMOs. Our greatest weakness as a profession arises from our fragmented system and our spotty performance as well as our helplessness without experts in the field of marketing, underwriting and electronic data processing so necessary for claims review.

ROLE OF THE COLLEGE

Now what is the role of the College in such an

environment. Traditionally the American College of Surgeons has been concerned with elevating the standards of surgical training and in producing some of the finest graduate surgical training programs in the world. Over the years the College has grown in stature and in numbers until half its membership is composed of members of the surgical specialties. While the College growth and development have been most satisfactory, most of the Fellows feel that the College has a new role to play. The health care field is undergoing tremendous economic, political, and technological change, and this change is accelerating. These changes have had a profound effect on the College and have resulted in the awakening of a new social consciousness.

There is no question but what greater government involvement in medicine is coming. The only question is What direction will it take? At one end of the spectrum we have the administration's suggestion of mandating the coverage for health insurance on the employers and employees, keeping the cost from showing up as a federal tax. On the other end of the spectrum there is the Kennedy-Griffith bill which would finance the program under the existing social security mechanism. The Nixon plan would use the existing system of Blue Cross-Blue Shield and the commercial insurance plans as insurers of the risk. Under the Kennedy-Griffith plan existing agencies might be used only as agents of the government in carrying out the program. Finally, the President's plan is not primarily based on making any major changes in the delivery system except with respect to encouraging HMOs.

STANDARDIZATION OF SURGICAL PRACTICE

Among medicine's responsibilities is now included an increased accountability for the expenditure of the funds for medical care. This shift has required the designing of sophisticated computer systems which in the long run will force the practice of surgery into more standardized patterns. Without such systems utilization review, cost and quality controls would be impossible because of the sheer volume of claims. Not only are the big buyers led by government demanding this increased accountability, but they may require certification for the continuing education of the surgeon as well as the possibility that they will pay lesser fees to non-Board qualified surgeons.

It would appear that the College might play one of several roles: first, that of expectant waiting to see what is being filed or planned for American

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surgery as legislation is being drawn up and rules and regulations are printed in the Federal registry; second, that of financing a powerful lobby as the A.M.A. has done in its efforts to obstruct legislation felt not to be in the best interests of medicine or the public; and third, to maintain and further enhance the position of respect in the eyes of the public as we serve in a consulting role in the drawing up of legislation, rules, and regulations having an impact on the health care delivery.

WORKING RELATIONSHIPS NECESSARY

In order to maintain our credibility and to play an effective and respected role the College must develop a close working relationship with government agencies, Blue Cross-Blue Shield, and the insurance industry, which will administer the programs. Further, if the College is to be involved in meetings and negotiations with the administrators of these programs they must have access to an updated and comprehensive data bank. The input for such sources will come from utilization and peer review committees and from PSROs, Foundations, and HMOs. It is from the collection of such data that our future information on our health care delivery system must eventually come. These are the computers of the intermediates and the intermediaries will need and welcome the help of the College.

One current system in California can subject a claim to 11,500 edits and audits but to be effective they need to have acceptable norms and guidelines. They need to know when a claim should be

kicked out for lay scrutiny and medical review. These decisions in surgery can properly be made by the American College of Surgeons. Such a computer system can tell a committee who is ordering duplicate laboratory tests and x-rays, who is ordering incompatible drugs, who is over-utilizing hospital beds, and finally how our efforts compare one with another. Such information can only result in a higher quality of medical care. No problem can be solved until it is identified. As I see it, the role of the College as implemented through its Chapters in the immediate future must be that of the protector of the best interests of the patient — the wise, impartial counselor and advisor — and coordinator for the mass of data that will eventually be spread across the public record.

Finally, and of equal importance, the College must carry on a continuing program directed toward the enlightenment not only of the public but of those financing medical care as to the environment so necessary for the attraction of young men into the surgical specialties and for their continued growth and development.

In closing I would like to commend the Rhode Island surgeons for re-activating this Chapter and I know that they will play an important role in the immediate years ahead in maintaining the high standards of American surgery and those of the College of Surgeons.

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Dr. Ephraim Luzzatto, Physician And Poet 1729-1792

Writer In Hebrew Takes His Rightful Place In A Long Line Of Physician-Poets

By Harry A. Savitz, M.D.

Ephraim Luzzatto was born in 1729 in San Daniele in Northern Italy. The son of a prominent Jewish Italian family, he was also known by his Italian name of Angelo. Jews have the fine art of adapting to the culture of the land in which they reside, and so Angelo, born and educated in Italy, where the air is filled with song, sang and composed songs. But the Jew, though toiling in other gardens, seldom forgets his own vineyard, and Ephraim the Jew studied the Bible and the Hebrew language, and acquired a rich and sensitive Hebrew vocabulary.

Medicine seems to have been the intellectual outlet of his family. His grandfather, Isaac Luzzatto, received his medical degree on February 20, 1687, and Isaac's son, Raphael, was graduated on May 4, 1717. Raphael had three sons — all were physicians and graduates of the University of Padua. Ephraim's brother Isaac, also a famous poet, received his degree on July 29, 1747. So it was natural that Ephraim at the early age of 13 matriculated at the University in 1742. He received his M.D. degree in May, 1751.

He practiced for some years in Padua, in Liv-

orno, and in Trieste, as well as in other Italian cities. There were large Jewish communities in each of these cities and he became their beloved physician. On various auspicious occasions he dedicated poems in their honor, often written on prescription blanks. The chief characteristic of his poetry was its light and natural tone.

He wrote poems commemorating events in the life of the community, sometimes even trivial events, such as the birth of a son in a family of a friend who had three daughters. In general, Luzzatto viewed life in a playful mood. But as is characteristic of Hebrew writers and poets nurtured on the Bible, he developed a deep urge for perfection and aimed his sarcastic arrows at physicians whom he felt had undignified bedside manners. The following is a free translation of a stanza of one of his poems:

If the patient was a beautiful dame
To sooth her pain hours took
But if she were old and lame
Sufficient was one minute to look.

He also produced a simple guide to good living:

Enjoy wealth, its loss do not despair
Be ever wise, do not abuse the uncouth
To everyone be pleasant and fair
Adore the aged and love youth.

(Continued on next page)

HARRY A. SAVITZ, M.D., of Brookline, Massachusetts, Physician-in-Chief Emeritus, Hebrew Rehabilitation Center, Roslindale, Massachusetts.

In a more serious mood, he composed a stormy poem, "Kez Kol Busar", in which he bewailed the vanity and brevity of human life. He advised against pursuing worldly pleasure for tomorrow for one does not know what today will bring.

Like the physician, poet and philosopher, Judah-ha-Levi (1085-1142), whose best known and most beloved poems were inspired by a yearning for Zion, Luzzatto wrote three poems in which he poured out his heart, bewailing the desolation of Zion and praying for its restoration. In a poem entitled "Lemaan Zion Lo Echshi" ("For the Sake of Zion I shall not keep silent") he wrote:

A jackal am I for wailing Zion's desolation
No rest for me until its restoration.

Doctor Luzzatto was a restless person in his youth, he married young and his wife died shortly thereafter. This was perhaps one of the reasons that he moved to London in 1763, where he was an attending physician at the Hospital of the Portuguese Jewish community for 30 years. But even though he was fully occupied with his work, he managed to continue his writing of Hebrew poetry. He was married to medicine, but poetry was his mistress.

In 1768 he published his collection of poems titled "Ele Bene ha-Neharim" ("These are the children of youth"). The title implies that these poems are the children of the poet. Only 100 copies were printed, for distribution among his friends rather than to the reading public. He left many more poems in manuscript, a box full it is claimed; but the person who came into their possession did not understand their value, and they were burned.

In 1792 Luzzatto decided to leave London and return to Italy, his native land. He was old and sick and probably felt that his days were numbered. Since he was a widower, he lived alone and longed to return to his home and die among his friends. He went home by way of Lausanne, Switzerland, so that he could consult with the then world famous practitioner, André Tissot (1728-1797). But his condition worsened, and death met him on the way. Luzzatto died in Lausanne in 1792 at the age of 63. Luzzatto left a will, which according to historian Cecil Roth he wrote just before he left London for his return to Italy. In it he disposed of his small property. He had a devoted housekeeper, who took care of him faithfully, and in his will he remembered her and others who had befriended him.* The following passages from his will are of interest:

London 17th April 1792

I Angelo Luzzatto, upon the point of setting off for Italy seriously reflecting that Death bears universal sway and seizes the poor victims everywhere judged it expedient to dispose of what little property I leave behind as follows:

To my dearly beloved housekeeper, Miss Ann Davis £300, as an acknowledgement for her kind assiduities and constant attachment to my person.

To Kempe Brydggges, Esqr. formerly a lace-man in Bedford Street and in case of his decease, to his son, Kempe Brydges, Junr. Esqr., £200, as a grateful sense of the unparalleled kindness and unbounded assistance I have received from the old gentleman in all the troubles and difficulties I met with during a long period of time after my arrival in England.

To my brother Dr. Isaac Luzzatto of St. Daniel in Trinlia (Friuli) £150, and to the heirs of my late brother Menosta (Menasseh?) Luzzatto, £100. After these legacies are paid, it is my wish that my friends, Mr. N. Modigliani and Mr. P(eter) Burcan will accept £25 each, and kindly undertake the trust of executing this my last will. To the present Recorder of London, to Capt. Churchill, to Mr. Prince, to John Bradburne Esqr., to Mr. Sciaccalaza, and to my servant, Elizabeth Brewer, £10 each.

To Mr. P. Molini, of Woodstock Street, and to Judith Sympson of No. 8 Hemmings Row, £5 each.

Mr. Hughes, Mr. Foy and Mr. Levy, my good Executors clerks, and to Mrs. Mansell and T. Hall £5 each.

I leave the necessary sum for the payment of my arrears to the Portuguese Synagogue, and what might be left of money together with my household furniture, apparel, plate, linen and every article in my possession I leave to my beloved friend Miss Ann Davis to whom, as indeed all mankind perfectly resigned to my fate, I wish peace and happiness.

Luzzatto's entire contribution was that he left also a tiny volume of Hebrew verse to make its niche in the temple of modern Hebrew literature.

(Concluded on page 339)

*In a codicil to the will Luzzatto also left "to Miss Marianne Perrouet du Chateaux d'Oix dwelling at Lausanne a la rue Pallud, five Louis d'or or 85 Francs . . . , each payable and deliverable by Miss Ann Davis, living with said testator". Luzzatto had the reputation of being somewhat of a roue.—ED.

COMPARABILITY OF DATA

Published elsewhere in this issue is a paper by Doctor George R. Dunlop concerning the role of the American College of Surgeons in furthering quality assurance in medical care. He discusses the need for an updated and comprehensive nationwide data bank. In addressing this goal the American Medical Association House of Delegates at its recent Annual Meeting passed a resolution presented by the Rhode Island Delegation and aimed at the objective: "That the American Medical Association assume an active role in the establishment of compatibility of diagnostic codes for hospital discharge data."

Agencies routinely involved in the collection of discharge data include the individual hospitals, the discharge abstract data systems, state and local health departments, areawide health planning agencies, health service research agencies, regional medical programs, Blue Cross plans, Blue Shield plans, commercial insurance companies, insurance commissions, hospital associations, hospital cost analysis commissions, hospital licensure agencies, health departments, the medical community, and medical education institutions.

Among the discharge data abstract systems currently in operation are the following: The Commission on Professional and Hospital Activities (CPHA) of Ann Arbor, Michigan with its Professional Activity Study and Medical Audit Program (PAS-MAP); the Hospital Utilization Project (HUP) of Western Pennsylvania; the Quality Utilization Effectiveness Statistically Tabulated (QUEST) system of Northeastern Ohio; the Blue Cross Data System (BCDS) of the State of Maine; the Experimental Medicare Review Organization (EMCRO) of the Mississippi Quality Care Review Project; the California Health Data Corporation (CHDC); the Certified Hospital Admissions Program (CHAP) of the Sacramento Foundation for Medical Care, the Hospital Admission and Surveillance Program (HASP) of Illinois; the Hospital Admission Program (HAP) of New Mexico; Utilization Review Program (BURP) of Connecticut; also from Connecticut, the Connecticut Utilization and Patient Information Service (CUPIS) of which BURP is a part; the Health Data Service (HDS) of Maryland; the Health Service Data (HSD) of Wisconsin; the Health Services Data System (HSDS) of Iowa; the sev-

eral Foundations for Medical Care not listed here; and undoubtedly others. The late Al Smith would have called this alphabet soup. Several diagnostic codes are in use by these services, some unique, others used by several systems.

PAS-MAP accounts for some 38 per cent of all discharges in the United States. All other systems combined, it is stated, account for some 10 per cent. Compatible systems thus may account for in excess of 40 per cent of all discharges.

According to the recently published Summary Report on The Uniform Hospital Discharge Data Demonstration: "A national uniform reporting of data from hospital abstracts is feasible with a reasonable degree of effort. Contributing to such a system would not seriously interfere with the operation of specialized regional data systems, and an acceptable level of accuracy and completeness could be anticipated if consistent communications, training, and coordination were available over a protracted period of time."

With the imminent establishment of PSROs, this problem is of immediate concern to organized medicine. It has been stated that in the 50 states there could be as many as 350 PSROs. Together with the panoply of interested organizations and systems mentioned in the preceding paragraphs, total confusion could result if each organization went its own way. While the AMA resolution was directed primarily to hospital data, attention ultimately must be given to related problems in the review of out of hospital practice as well.

Murnaghan and Kerr White of Johns Hopkins, long interested in this problem, have stated: "With the likelihood that there will be a rapid expansion of hospital reporting systems in the years ahead, it is essential that standard terminology and systems of classification be adopted for the basic items of information, and that the definitions be compatible with those used for the basic items of information, and that the definitions be compatible with those used for ambulatory and other types of care, so that hospital inpatient care can be studied in conjunction with the other elements of the health-services system". Pointing out that the data from competing systems often have to be translated for comparison, they continue: "The trend toward the development of non-profit, voluntary data systems

(Continued on next page)

and the likelihood that there will continue to be a variety of hospital data systems rather than a single system raises the question of how the data from multiple sources can be pooled, processed and distributed . . . (In fact,) in many parts of the country, more than one system is operating . . . A comprehensive information system can become one of the important unifying forces in an otherwise fragmented system of medical care and introduce some measure of coordination between the many competing and overlapping parts of the sys-

tem, and this should be the ultimate goal of those seeking to improve hospital statistics."

It is important, therefore, that every effort be made to keep the dissemination of abstract systems orderly and compatible to the end that chaos will be avoided and valid interregional studies and comparisons can be made. It would be ideal if computer could talk to computer without interminable reabstracting. Otherwise we shall have a computerized Tower of Babel.



PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

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Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in

INDEX MEDICUS giving author (co-authors up to three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

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tial leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. Exacerbation of moniliasis may occur. In amebic liver abscess, aspirate pus during metronidazole therapy.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the

mouth, vagina or vulva, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified. Flattening of the T wave may be seen in ECG tracings.

Dosage and Administration: For Trichomoniasis. In the female: One 250-mg. tablet orally three times daily for ten days. Course may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during, and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used, one 500-mg. insert is placed high*



the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the male:* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

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Dosage forms: Oral tablets 250 mg.
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References:

1. Perl, G., and Ragazzoni, H.: Flagyl in Treatment of "Trichomonas Vaginalis" Vaginitis, *Obstet. Gynecol.* 19:595-598 (May) 1962. 2. Kean, B. H.: Trichomoniasis in Males (Letters to the Journal), *J. A. M. A.* 186:273 (Oct. 19) 1963. 3. King, A. J.: Current Therapeutics: CLVI.—Metronidazole in the Treatment of Trichomonal Infections, *Practitioner* 185:808-812 (Dec.) 1960. 4. Watt, L., and Jennison, R. F.: Clinical Evaluation of Metronidazole: A New Systemic Trichomonacide, *Br. Med. J.* 2:902-905 (Sept. 24) 1960. 5. Watt, L., and Jennison, R. F.: Metronidazole Treatment of Trichomoniasis in the Female, *Br. Med. J.* 1:276-279 (Feb. 3) 1962. 6. Teton, J. B., and Treadwell, N. C.: Evaluation of a Systemic Trichomonacide, *Obstet. Gynecol.* 21:356-362 (March) 1963. 7. Durel, P.; Roiron, V.; Siboulet, A., and Borel, L. J.: Systemic Treatment of Human Trichomoniasis with a Derivative of Nitro-Imidazole, 8823 R. P., *Br. J. Vener.*

Dis. 36:21-26 (March) 1960. 8. Bertrand, P., and Leulier, J.: Essais cliniques sur la trichomonase des partenaires des femmes infestées (Proceedings of the 1st Canadian Symposium on Non-Gonococcal Urethritis and Human Trichomoniasis, Montreal, 1959), *Gynaecologia* 149:93-96 (Suppl.) 1960. 9. Poole-Wilson, D. S.: The Diagnosis and Management of Chronic Infection of the Bladder, *Practitioner* 186:429-437 (April) 1961.

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BOOK REVIEWS

(Continued from page 310)

ance one is willing to accept the obvious, then one must conclude that there are predominant aggressive and passive roles assigned to sexual differences. A corollary and an extension of the argument is that true sexual identity as part of any human being's total identity depends on an integration of these fundamental attitudes and behavior patterns in the social environment in which he operates. Physical and mental well-being usually follows when there is a perfect integration between emotional and biological needs and his social behavior.

Social organizations primarily have evolved more effectively to secure the non-sexual needs of individuals, namely: the securing of food and shelter, and the elimination of noxious insults from the environment, whether they be disease, famine, or predation from other animals, including the human. The cerebral cortex has permitted man to control his instinctual sexual behavior, whether it be male or female, to these ends. Hence in all society the codification and taboos about sexual behavior are to permit the survival of a social organization. A consequence of being human and belonging to a human society is the necessity to recognize the

consequences of this species adaptation with respect to reproduction. In human social behavior we must accept as premises a gestational period of close to a year and morning sickness during the first trimester; and we must clearly recognize the total dependence of the offspring on outside help for a period of at least three years, and more probably four. Full growth and maturity at the most conservative estimate would be 14 years. The passive role of the female and her lack of aggression is clearly an advantage to society in her acceptance of the rearing of the child. One might even philosophically speculate that if there is anything to survival of the fittest, homo sapiens today is the result of the offspring of those females who most highly typified the capabilities for this type of behavior. It should also be quite obvious that the unencumbered male in the social group is the logical provider of protection of the female both during the period of her child bearing and child rearing age. Human social organizations regardless of where they are found generally recognize this principle and its taboos; the same behavior is seen certainly in most primates, and generally in most mammals. To argue on teleological bases and by analogy is always fraught with danger, but
(Continued on next page)



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there is little else on which to argue. Certainly the opponents of these hypotheses and premises can argue on less solid ground.

Marriage is not a biological, but a legal institution. The arguments of the Women's Liberation movement that it is female enslavement is ridiculous at the outset. Marriage certainly in the Judeo-Christian philosophy is a recognition of the concept that woman in return for her enslavement to herself through the biological nature of gestation and child rearing should have some guarantee from society that in perpetuating the species her needs are cared for. Marriage merely recognizes the passivity of the female, and the wandering, promiscuous, aggressive nature of the male.

Since marriage is a legal contract primarily designed to protect the female, it is quite possible that our marriage institutions and divorce laws may be questioned in an affluent society where such protection and guarantees may not be required. The welfare rolls and Aid to Families of Dependent Children are clear enough evidence that the males of the human species, far from enslaving women, are much more wont to be free of them after sexual gratification. Marriage contracts enslave only the male to provide economic support. Whatever evolves with our affluence, it is clear that the female of the species must be given the time for rearing the children, and freedom from economic responsibility while performing her primary chore. What form marriage, or the lack of it, takes in the future will be dependent entirely on social and economic conditions. This, by the most casual review of the history of marriage customs, is clear.

Mrs. Decter in her own way has intuitively and thoughtfully understood most of the arguments which this reviewer has put forth. Her book is divided into four parts, the first titled "Shitwork". It deals essentially with the argument about woman's opportunity to compete in the market places on an equal basis with men. She begins by calling attention to Betty Friedan's *The Feminine Mystique* and discusses the arguments that woman is primarily unhappy because of her lack of entry into the professions on an equal footing.

In her second section, "The Beast With Two Backs", Mrs. Decter has been most eloquent. The new sexual freedom has compounded problems rather than simplified them. She argues strongly for the positive values of chastity as contributing to woman's freedom to choose and to choose wisely,

to behave in the real world towards the opposite sex without schizoid reactions. Without the prerogative of social acceptance of chastity in interpersonal relations, she is faced with two alternatives: one, of rejecting every passing man's attention and thereby rejecting him personally, thus destroying a pleasant relationship; or to obligate herself to take on any and all comers. She then faces the problem of getting straight A's for her performance. Mrs. Decter realizes feminine psychology in stating that the human female does not respond to casualness in the same manner as the promiscuous male. It is simply biologically impossible for a woman to find identity, or be in tune with her biological self in so doing; chastity is the more normal prime attitude of the female, this to be overcome by a truly dominant male. Mrs. Decter sees no liberation, but rather enslavement to herself, in assuming a false role.

In her final sections on "Wiving" and "Breeding", Mrs. Decter again shows that she understands both the biological background of the human race and the sociological implications of the civilizing process. In a word, biologically women are essentially monogamous, and still and probably will covet the phenomenon of being "chosen". There are overwhelming examples by analogy throughout the animal kingdom of the selection of females and the mating process; this is more than an intuitive feeling on Mrs. Decter's part, but rather an innate and subconscious realization of the way things are. In her last section on "Breeding" she discusses the desire to create, which is woman's sole prerogative. This is innate, biologically and psychologically. To deny this urge and impulse really is to interfere with a woman's personal and biological identity.

In summation, Mrs. Decter has recognized inequities on social, political, and economic fronts with respect to women's rights. We disagree with Women's Liberation in those areas where it would appear that its advocates are asking for a liberation from the fact that they are biologically, physiologically, and ethnologically women. In asking for freedom by society from something which is biological is asking the impossible. The only happy person is one who realizes and expresses to the fullest his or her individual, personal identity; being a *man*, or a *woman*, is the important thing.

ROBERT V. LEWIS, M.D.



NEW CONCEPTS OF PATHOGENIC MECHANISMS IN ALLERGY

(Concluded from page 328)

sibly accounting for the hereditability of atopy. If the shock organ is the lung, asthma may result. If the shock organ is the nasal mucosal membranes, hay fever may occur; and if the shock organ is the skin, the end result may be atopic eczema. The problem of which shock organ is involved may be due to gene interaction with environmental factors, such as a localized infection at some early point in life.

In addition, an attempt has been made to integrate various peripheral immunologic information into the central concept of Sutherland's second messenger theory involving alpha and beta receptor sites, adenylyl cyclase, cAMP, and allergy mediators. Szentivanyi's Beta Adrenergic Theory of atopic abnormality in bronchial asthma appears thus far to be an excellent working hypothesis for gathering and organizing further immunologic information on allergy.

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The list of references may be obtained from the author or from the Rhode Island Medical Society Library.



PHYSICIANS SEEKING R. I. OPPORTUNITIES

(Concluded from page 311)

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* * *

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Internal Medicine, Gastroenterology



DR. EPHRAIM LUZZATTO, PHYSICIAN AND POET

(Concluded from page 334)

REFERENCES

¹Shirei Ephraim Luzzatto (Hebrew) with Introduction by Jacob Fichman, Tel Aviv, 1942

²Myer Waxman: A History of Hebrew Literature, Vol. 111, P. 134, Bloch Publishing Co., 1934

³Sefer Hayyim Schirmann, Introduction and profile of Ephraim Luzzatto by C. Roth, P. 369, Jerusalem, 1970

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PROSPECTS FOR HEREDITARY DISEASE CONTROL

(Concluded from page 320)

develop adult cancers they do so much earlier than is generally observed. What is important here is that some fraction of all cancer patients constitutes a high risk group which can in some cases, and perhaps ultimately in all cases, be identified. Such individuals may be considered along with those in the other genetic categories as far as prevention and treatment are concerned. Most cancer, however, occurs in individuals who are not genetically predisposed. If mutation is in fact a necessary initiating step, then attention must be paid to reducing the probability that mutation will occur and to correcting or destroying the cell which has undergone such a change.

PROSPECTS

Obviously then, the prospects for hereditary disease control are strongly dependent upon the genetic class to which a disease belongs. For chromosomal disorders the prenatal onset of disease and the high fraction of cases which result from new and unpredictable events argue strongly in favor of fetal diagnosis and induced abortion as a means of control. For some Mendelian disorders this approach may be used, but so also may that of prevention via identification and counseling of gene carriers. Treatment is a much more immediate prospect, and this is the best group for consideration of gene therapy. For polygenic disorders, which are often very common, preventive measures of a genetic nature are most limited, while treatment is more promising. Finally, somatic genetic disease displays features of all of these, but in addition the enormous importance of new mutations in somatic cells emerges.

These prospects include measures still considered fanciful, but so much that is fanciful has happened in biology that they and their ethical consequences must be considered now before they are upon us. The genes that cause disease will not go away of their own accord, because new mutations will continue. In fact, they are necessary for the operation of adaptation and evolution among all species, and the hereditary diseases are the price we pay because mutation does not distinguish between "good" genes and "bad" genes.

The old argument of nature versus nurture has little meaning now for medicine. Seeing the exquisite interaction of the two, we are better advised to consider both genetic and environmental factors in all disease. We are quickly moving to-

ward identification of genetic predisposition to so-called acquired diseases and to the identification early in life of each person's "genetic weaknesses." The prospects for hereditary disease control are therefore prospects for amelioration of all disease.



PERIPATETICS

(Concluded from page 313)

M. HOWARD TRIEDMAN was elected a member-at-large of the Executive Committee on recommendation of the Nominating Committee which was headed by STANLEY SIMON and included ALDEN H. BLACKMAN, HENRY F. IZEMAN and JAY M. ORSON.

Other members of the Executive Committee include STANLEY M. ARONSON, Pathologist-in-Chief; ROBERT P. DAVIS, Physician-in-Chief; HARVEY P. LESSELBAUM, Radiologist-in-Chief; FIORINDO A. SIMEONE, Surgeon-in-Chief; STANLEY SIMON, Association past president and PHILIP A. TORGAN, member-at-large.

* * *

ROBERT E. BAUTE has accepted an invitation to membership on the Technical Advisory Committee on Air Pollution of the Rhode Island Tuberculosis and Respiratory Disease Association.

* * *

New officers of the Rhode Island Thoracic Society, medical section of the Rhode Island Tuberculosis and Respiratory Disease Association, are:

JAMES F. VALICENTI, president-elect; CHARLES F. KERSHAW, D.O., vice president; ORLANDO M. ARMADA, secretary-treasurer; JORGE BENAVIDES and ROBERT E. BAUTE, members-at-large, executive committee.

* * *

BEN C. CLAUNCH, elected in 1972 for a two-year term, continues as president. HERBERT F. CONSTANTINE continues as liaison with the American Thoracic Society.



ONE SENTENCE ESSAY

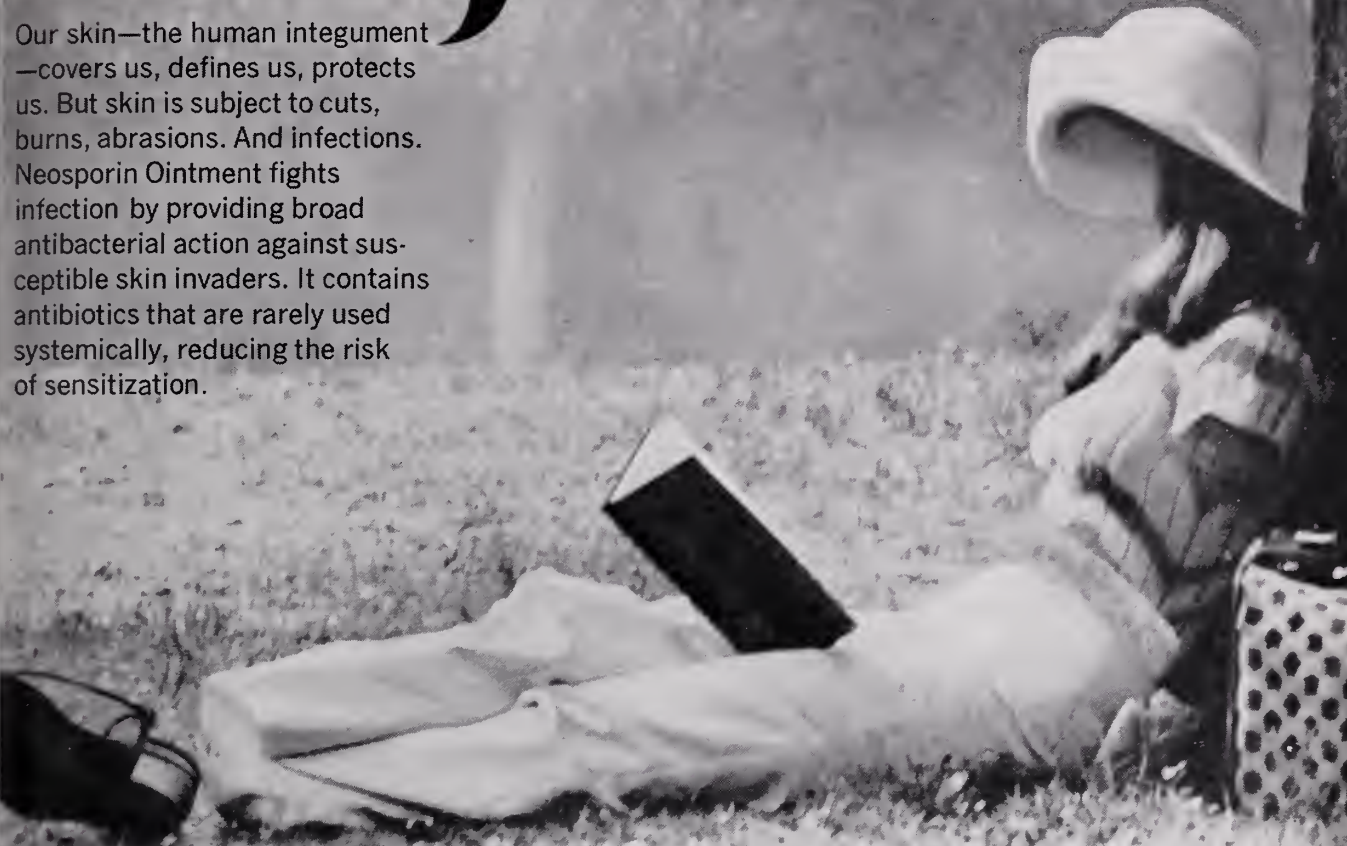
Library Department

An American traveler doing research in the Vatican Library in Rome needed to consult a work published in 1580. He filled out a request slip which was later returned to him marked "Missing since 1635."

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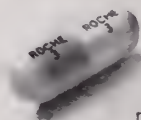
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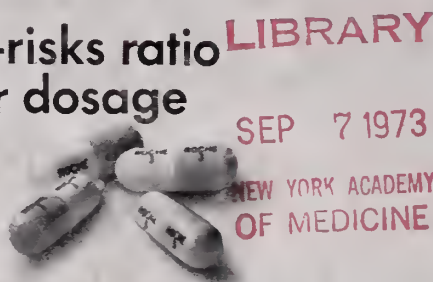
Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxious states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruption, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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September 1973

Vol. 56, No. 9

BALCONY

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While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

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Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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To help you manage excessive psychic tension

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SEPTEMBER, 1973

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and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug. **Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute

and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement. (B)98-146-070-H(10/71)

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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



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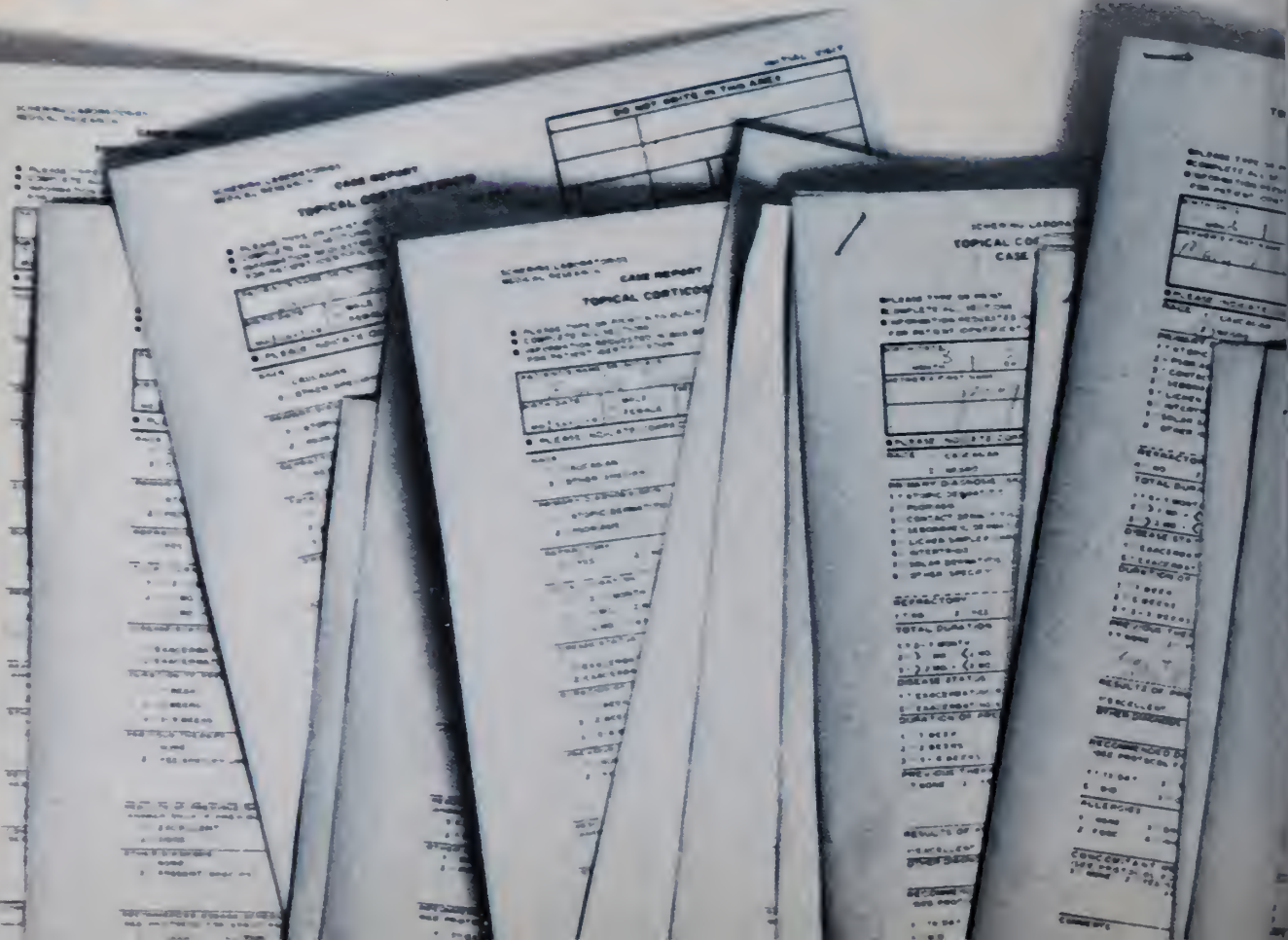
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References: (1) *Files of Headquarters Medical Research Division, Schering Corporation.* (2) Carter, V. H., and Noojin, R. O.: *Curr. Therap. Res.* 9:253, 1967. (3) Falk, M. S.: *Cutis* 2:788, 1966. (4) Goldblum, R. W.: *Pennsylvania Med.* 69:50, 1966. (5) Niernan, M. M.: *J. Indiana M. A.* 10:1184, 1966. (6) Zimmerman, E. H.: *Arch. Dermat.* 95:514, 1967.

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ETHNICITY: CAUCASIAN

RELIGION: PROTESTANT

EDUCATION: HIGH SCHOOL

PROFESSION: ENGINEER

RESIDENCE: 1111 1/2 ST. N. W. ALBANY, GA. 31707

PHYSICIAN: DR. J. H. BROWN

DATE OF REFERENCE: 10/15/64

REASON FOR REFERENCE: 1. PRURITUS 2. ERYTHEMA 3. SCALING 4. DISCOLORATION 5. CRACKING 6. BURNING 7. STINGING 8. OTHER (SPECIFY)

ONSET: 1. ACUTE 2. CHRONIC

LOCATION: 1. FACE 2. NECK 3. CHEST 4. BACK 5. LIMBS 6. OTHER (SPECIFY)

DIAGNOSIS: 1. ECZEMA 2. DERMATITIS 3. CONTACT DERMATITIS 4. SEBORRHEIC DERMATITIS 5. LICHEN SIMPLEX CHRONICUS 6. INTERTRIGO 7. SOLAR DERMATITIS 8. OTHER (SPECIFY)

REFRACTORINESS: 1. NO 2. YES

TOTAL DURATION: 1. 1-3 MONTHS 2. 3-6 MONTHS 3. 6-12 MONTHS 4. 1-2 YEARS 5. 2-5 YEARS 6. 5+ YEARS

DISSEMINATION: 1. LOCALIZED 2. SPREADS TO OTHER PARTS OF BODY 3. SPREADS TO OTHER PARTS OF BODY

QUALITY OF PATIENT COMPLAINT: 1. GOOD 2. FAIR 3. POOR

PHYSICIAN'S COMMENTS: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

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PROFESSION: ENGINEER

RESIDENCE: 1111 1/2 ST. N. W. ALBANY, GA. 31707

PHYSICIAN: DR. J. H. BROWN

DATE OF REFERENCE: 10/15/64

REASON FOR REFERENCE: 1. PRURITUS 2. ERYTHEMA 3. SCALING 4. DISCOLORATION 5. CRACKING 6. BURNING 7. STINGING 8. OTHER (SPECIFY)

ONSET: 1. ACUTE 2. CHRONIC

LOCATION: 1. FACE 2. NECK 3. CHEST 4. BACK 5. LIMBS 6. OTHER (SPECIFY)

DIAGNOSIS: 1. ECZEMA 2. DERMATITIS 3. CONTACT DERMATITIS 4. SEBORRHEIC DERMATITIS 5. LICHEN SIMPLEX CHRONICUS 6. INTERTRIGO 7. SOLAR DERMATITIS 8. OTHER (SPECIFY)

REFRACTORINESS: 1. NO 2. YES

TOTAL DURATION: 1. 1-3 MONTHS 2. 3-6 MONTHS 3. 6-12 MONTHS 4. 1-2 YEARS 5. 2-5 YEARS 6. 5+ YEARS

DISSEMINATION: 1. LOCALIZED 2. SPREADS TO OTHER PARTS OF BODY 3. SPREADS TO OTHER PARTS OF BODY

QUALITY OF PATIENT COMPLAINT: 1. GOOD 2. FAIR 3. POOR

PHYSICIAN'S COMMENTS: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

ROCHE announces new

BACTRIMTM

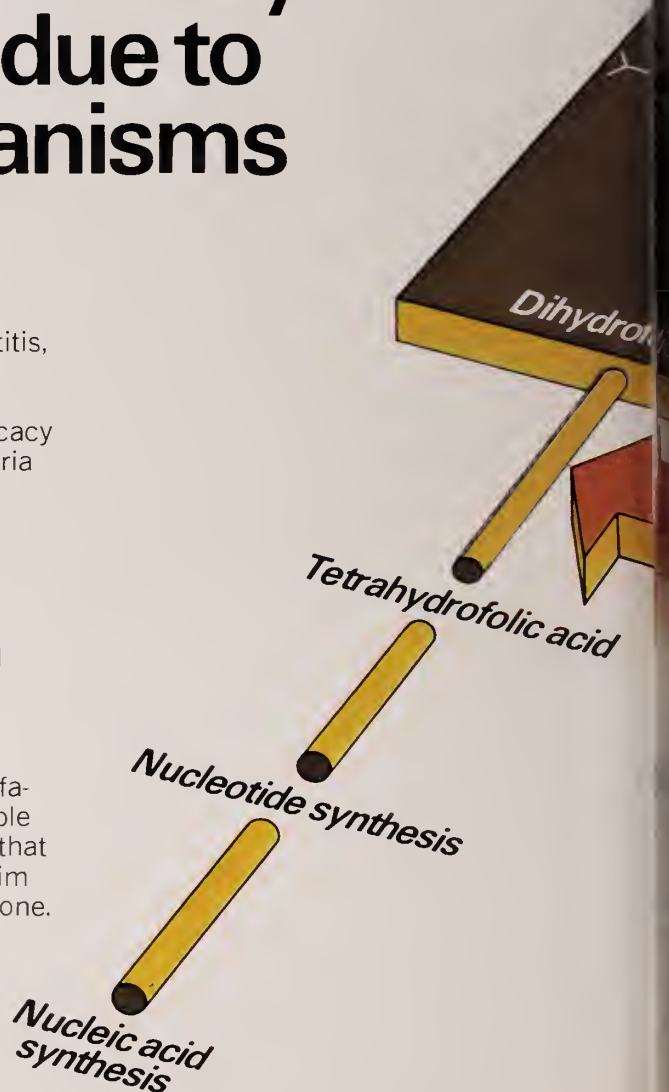
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

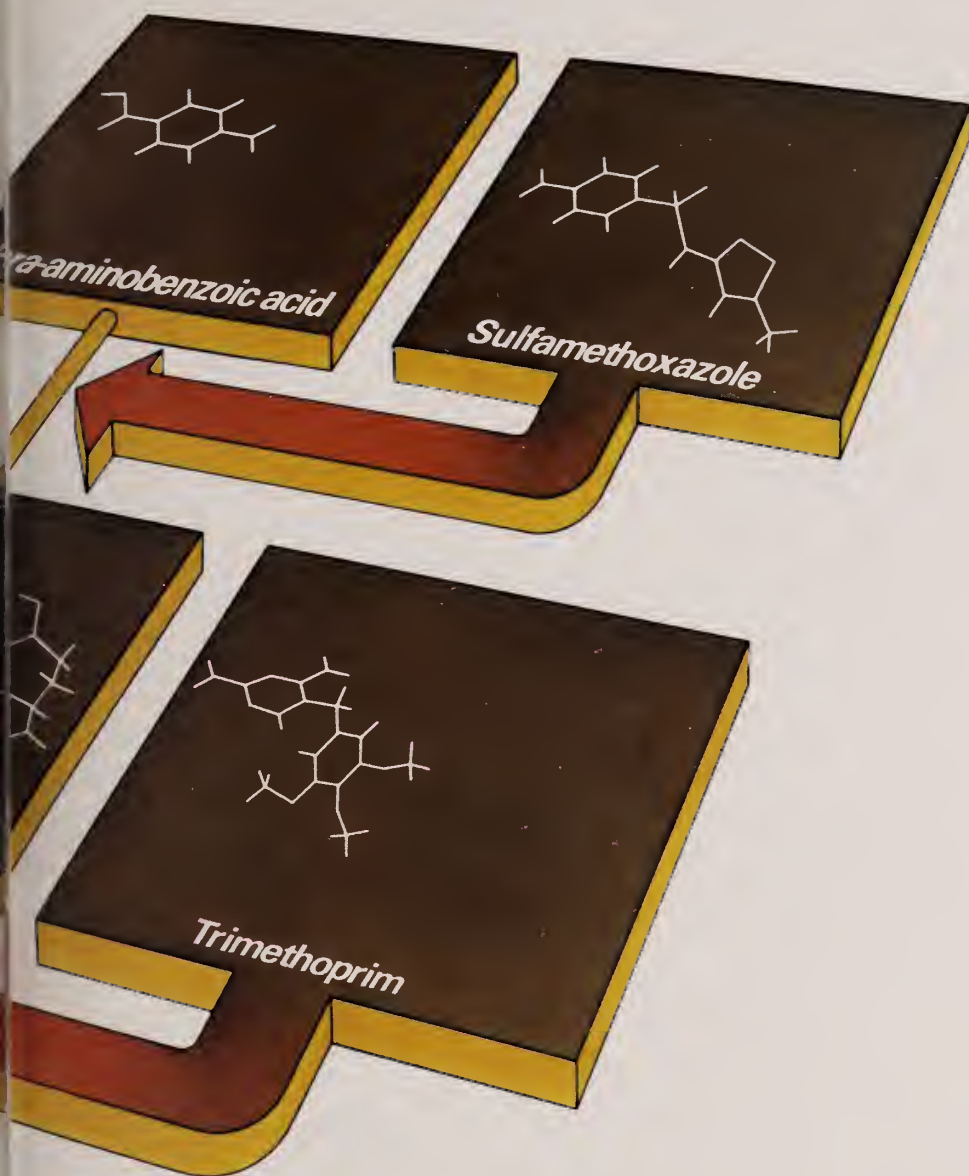
Bactrim is highly effective in the treatment of these infections – primarily pyelonephritis, pyelitis and cystitis, when due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species). This efficacy is related to the unique mode of action against bacteria (see opposite page), an action that, in effect, makes Bactrim a new type of antibacterial.

Bactrim significantly superior to constituents in patients with obstructive complications

In the presence of obstructive uropathy, Bactrim has demonstrated efficacy which is superior to either sulfamethoxazole or trimethoprim alone against susceptible organisms. In addition, *in vitro** studies have shown that bacterial resistance develops more slowly with Bactrim than with either trimethoprim or sulfamethoxazole alone.



*Please note that clinical conclusions cannot be extrapolated from *in vitro* studies.



Interrupts life cycle of susceptible bacteria

Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.

new **BACTRIM**TM

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

for chronic urinary tract infections

Before prescribing, please see complete product information on last page of advertisement.

Excellent clinical response in chronic urinary tract infections

A multiclinic, double-blind study* of response to a ten-day course of therapy in 471† patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. In patients with obstructive complications, 10th day response was 94.8% (of 97 patients) to Bactrim, 72.9% (of 85 patients) to trimethoprim and 58.5% (of 94 patients) to sulfamethoxazole.

Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after ten-day therapy with Bactrim, 68.4% of patients with chronic urinary tract infections maintained response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. In patients with obstruction, 70.8% of those on Bactrim maintained response for up to 42 consecutive days, compared

with 49.4% on trimethoprim and 38.8% on sulfamethoxazole. The figures are particularly remarkable in cases with urinary obstruction—cases regarded as being notoriously difficult to treat.

To date, low incidence of significant side effects

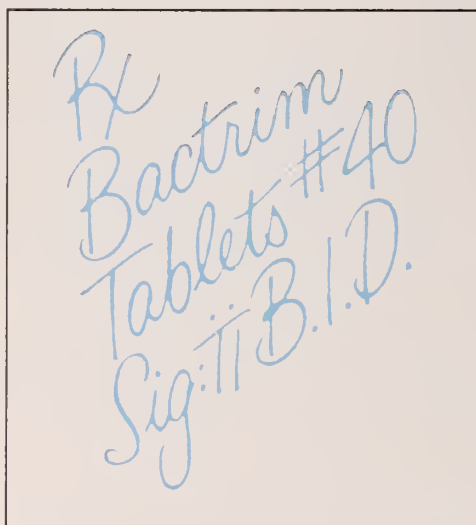
Although Bactrim demonstrated impressive clinical results, it is important to note that the incidence of clinically significant adverse effects was low, mainly nausea and/or vomiting, rash, leukopenia, SGOT increase and creatinine increase.

Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency and to those with severe allergic bronchial asthma. Adequate fluid intake must be maintained. Complete blood counts, urinalyses and careful microscopic examination, and renal function tests should be performed during therapy.

Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.

* Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 071
† 4 patients not available for evaluation at day 10.



new **BACTRIM**™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

for chronic urinary tract infections



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Before prescribing, please consult complete product information on facing page.

Complete Product Information:

Description: Bactrim is a synthetic antibacterial combination product, available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl) pyrimidine. It is a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is N¹-(5-methyl-3-isoxazolyl)sulfanilamide. It is almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

Actions: Microbiology: Sulfamethoxazole inhibits bacterial synthesis of dihydrofolic acid by competing with para-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

In vitro studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

In vitro serial dilution tests have shown that the spectrum of antibacterial activity of Bactrim includes the common urinary tract pathogens with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)

Bacteria	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20)	
			TMP	SMX
<i>Escherichia coli</i>	0.05—1.5	1.0 —245	0.05—0.5	0.95— 9.5
<i>Proteus</i> spp.	0.5 —5.0	7.35 —300	0.05—1.5	0.95—28.5
Indole positive <i>Proteus</i>	0.5 —1.5	7.35 — 30	0.05—0.15	0.95— 2.85
<i>Mirabilis</i>				
<i>Klebsiella-Enterobacter</i>	0.15—5.0	0.735—245	0.05—1.5	0.95—28.5

Human Pharmacology: Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to four hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. After repeated administration, the steady-state ratio of trimethoprim/sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the therapeutically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma increases the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than the concentrations in the blood. When administered together in Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

Indications: Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

Important note: Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides, pregnancy and during the nursing period (see Reproduction studies).

Warnings: Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

Precautions: Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

Adverse Reactions: For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

Blood dyscrasias: Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglobinemia.

Allergic reactions: Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

Gastrointestinal reactions: Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

C.N.S. reactions: Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

Miscellaneous reactions: Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

Dosage and Administration: Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

How Supplied: Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

Reproduction Studies: In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.

BACTRIM™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

**RHODE ISLAND POLICE CHIEFS ASSOCIATION
YEARBOOK DIVISION**

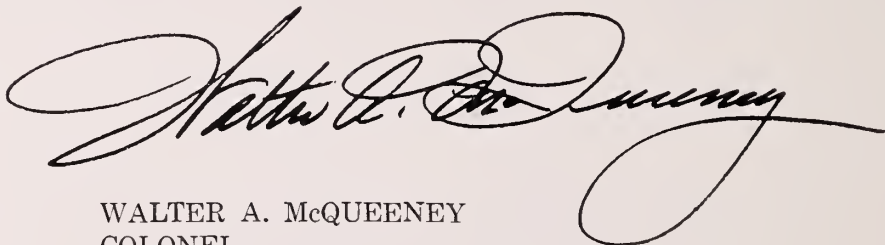
189 DOUGLAS AVENUE, P. O. BOX 6845
PROVIDENCE, RHODE ISLAND 02904
(401) 861-6106 – 861-6107

Colonel Walter A. McQueeney, President

DEAR DOCTOR:

I WISH TO TAKE THIS OPPORTUNITY TO THANK THE MEMBERS
OF THE RHODE ISLAND MEDICAL PROFESSION FOR THEIR MANY
“ANONYMOUS” AND “A FRIEND” ADVERTISEMENTS IN OUR
YEARBOOK.

YOURS IN THE SPIRIT OF MUTUAL ASSISTANCE,

A large, elegant handwritten signature in black ink, reading "Walter A. McQueeney". The signature is written in a cursive style with a large, sweeping loop at the end.

WALTER A. McQUEENEY
COLONEL
PRESIDENT OF R. I. POLICE CHIEFS' ASSOC.



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

MEDICAL EVENTS CALENDAR

THURSDAY, October 18, 1973

SIXTEENTH ANNUAL MURRAY A. DANFORTH ORATION
Presentation of Problem Cases

Rhode Island Hospital
George Auditorium
9:30 a.m.—12:30 p.m.

MURRAY A. DANFORTH ORATION
Charles F. Gregory, M.D.
Chief Pro-Tempore

George Auditorium
8:30 p.m.

FRIDAY, October 19, 1973

SIXTEENTH ANNUAL MURRAY A. DANFORTH ORATION
Presentation of Problem Cases

Rhode Island Hospital
George Auditorium
9:00 a.m.—12 noon

COLLOQUIUM
Sponsored by the Section of Biochemical
Pharmacology

Brown University
Barus and Holley 166
4:00 p.m.

SATURDAY, October 20, 1973

SIXTEENTH ANNUAL MURRAY A. DANFORTH ORATION
Charles F. Gregory, M.D.

Rhode Island Hospital
George Auditorium
9:00 a.m.

WEDNESDAY, October 31, 1973

THE TENTH ANNUAL MAURICE N. KAY PEDIATRIC SYMPOSIUM
NEW DEVELOPMENTS IN INFECTIOUS DISEASES
Dr. Floyd Denny, Dr. Keth N. Drummond, Dr. Samuel
Katz, Dr. Saul Krugman and Dr. Stephen H. Zinner

Roger Williams Gen. Hosp.
Kay Auditorium
10:00 a.m.—5:00 p.m.

FRIDAY, November 2, 1973

**ELEVENTH ANNUAL CHARLES A. STUART MEMORIAL LECTURE
THE BIOLOGICAL ROLE OF T-LYMPHOCYTES**

Dr. Byron H. Waksman
Department of Microbiology
Yale University

Brown University
Barus and Holley 166
4:30 p.m.

SATURDAY, November 17, 1973

**ONCOLOGY: RECENT ADVANCES IN DIAGNOSIS AND
TREATMENT**

Presented by the Rhode Island Chapter of the Amer-
ican College of Surgeons

Rhode Island Hospital
George Auditorium
8:30 a.m.—12:30 p.m.

8:30 A.M. Welcome by Henry T. Randall, M.D., F.A.C.S. Section Leader, Sec-
tion of Surgery

8:45 A.M. "The Case for the Surgical Staging of Hodgkin's Disease"
Thomas S. Nelsen, M.D.

9:20 A.M. "The Rationale for Combined and Sequential Chemotherapy"
Emil T. Frei, M.D.

9:55 A.M. "Surgery Through the Fiberoptic Colonoscope"
Hiromi Shinya, M.D.

10:30 A.M. INTERMISSION

10:50 A.M. "Newer Modalities for the Management of Rectal Carcinoma"
Maus W. Stearns, Jr., M.D.

11:25 A.M. "The Prospects for the Practical Application of Tumor Immunology"
Chester M. Southam, M.D.

11:55 A.M. Panel Discussion — Louis A. Leone, M.D., Chairman Director, De-
partment of Oncology, Rhode Island Hospital.

12:30 P.M. ADJOURNMENT

The Rhode Island Chapter of the American College of Surgeons will hold a
brief business meeting after the Symposium.





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

THE UNAFFILIATED HOSPITALS AND THE MEDICAL SCHOOL

The Brown Program in Medical Education operates with university campus resources serving as the hub for three concentric rings of clinical facilities. The inner ring is made of the six original members of the educational consortium formally established in 1969. These are the hospitals which for several years have committed significant resources to medical education and have already gained experience with the university affiliation through their participation in introductory clinical courses or clerkships. The group includes four general hospitals, the Rhode Island Hospital (R.I.H.) The Miriam Hospital, the Roger Williams General Hospital (R.W.G.H.), and the Memorial Hospital in Pawtucket, and two specialty hospitals, the Providence Lying-In, and Butler. Taken together, these six hospitals total 1,762 beds and include 39 per cent of the state complement of beds for short-term care. In 1973-74, the core components of clinical education have been organized in these hospitals as follows:

	RIH	Miriam	RWGH	Memorial	Lying In	Butler	Others
Hospital:							
Number of beds:	685	247	251	306	190	83	
Courses taught:							
Physical diagnosis	+	+	+	+			
Behavioral medicine	+	+	+	+			
Medicine	+	+	+				
Surgery	+	+					
Pediatrics	+				+		
Obstetrics							
Psychiatry						+	
Community Health	+						+

The second ring of affiliated hospitals is made of institutions which have not yet contributed to med-

ical school teaching in a major way, and yet have an educational tradition in a different context. Since January 1973, the Providence Veterans Administration Hospital (332 beds) has started transferring its academic affiliation from Boston University to Brown, whereas the Bradley Hospital in East Providence (70 beds) is now on the verge of signing an affiliation agreement that will formally recognize its participation in the teaching of pediatrics and psychiatry.

Taken together, the institutions in the first two rings represent close to one half of the short-term care beds in the state. The natural question is what will be the relationship of the Brown Program to the other half?

In view of the informal contacts developed with many of the non-affiliated institutions, it is very possible that before the end of this decade, all hospitals in the state will participate in our educational system, to the extent that their trustees and medical staff find appropriate. Our educational policy can be stated as follows. The core components of the medical curriculum, which involve the recurrent participation of significant groups of students in hospital activities, must of necessity be concentrated in a limited number of centrally located facilities. However, we welcome the participation of individual medical students in elective educational exercises focused in any health care facility, be it a non-affiliated hospital, a state operated facility or indeed an individual practitioner's office. When it comes to non-affiliated hospitals, we have formulated three conditions to the development of an educational association involving medical students 1) that the hospital designate, in concert

(Continued on next page)

with the Dean of Medical Affairs, a full time or part time member of its professional staff who will assume the responsibility for supervising the student activities and reporting their progress through the appropriate medical school channels (in short, carry the duties of a faculty member combined with those of a Director of Medical Education). 2) That the participation of Brown medical students in hospital activities be formally approved by the trustees of the hospital. 3) That the participation of Brown medical students in hospital activities be formally approved by the Executive Committee of the medical staff of the particular hospital.

Preliminary contacts which may lead to a memorandum of association of the kind outlined above have already been conducted with a number of hospitals. Typically, they focus on specific educational opportunities which students will elect on an individual basis under the supervision of a hospital staff member with an active interest in medical

education. These elective clerkships will not start until the latter part of 1973-74, once the third year class has completed the core clerkships in medicine, surgery, pediatrics, obstetrics, psychiatry and community health.

From the beginning our goal has been to avoid polarization of our state health system between teaching hospitals and community hospitals. Now we must also avoid polarization between the hospital setting and the ambulatory setting. Clearly some aspects of medical education require the specialized facilities of referral centers. However, we hope that our students will not be limited to this perspective, and we welcome any opportunity to broaden their education experience. All hospitals in the Rhode Island Area may help us to achieve that goal.

PIERRE M. GALLETTI, M.D., Ph.D.
Vice President
(Biology and Medicine)



PHASE IV AND PHYSICIANS

Relative to the Phase IV Price Regulations, physicians may raise their fees a maximum of 2.5% per year, provided the raise does not increase their profit margin. If a physician has not raised his fees since the institution of wage and price controls in 1971, the physician may raise his fees a cumulative total of 5%, provided he does not violate the profit margin test in doing so. Physicians are no longer required to post signs under the Phase IV regulations. The AMA has protested to President Nixon and the Cost of Living Council that the controls imposed on physicians are discriminatory.

Just what do you get for your AMA dues?

You get a package of personal and professional services and benefits you've probably never been fully aware of.

You get insurance programs at a cost considerably lower than those purchased on an individual basis. A \$250,000 Excess Major Medical Policy. Group Life. Disability Income Insurance. Professional Liability Insurance (in co-sponsorship with your state society.) Then there's the AMA Members Retirement Fund.

You get a comprehensive medical library to help you do your research. An editing service for your articles. Information and reports on

medical and health subjects from any AMA department.

You get publications to keep you abreast of medical and health developments. *JAMA*. *American Medical News*. And *Prism*, the new socioeconomic journal.

You get the Physician's Placement Service to help you find a place to practice or locate an associate. And if you're a resident winding up your training, there's a special workshop to help prepare you for setting up your practice.

All these are just a few of a broad spectrum of benefits and services you get for your dues. But even more important, you get a strong and effective national spokesman to represent you, your interests and your views.

Join us.

We can do much more together.

American Medical Association
535 N. Dearborn St./Chicago, Ill. 60610



Opinion & Dialogue

"Prescription drugs – who should determine the maker?"

Dispenser of Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by the AMA Chief Executive F. J. L. Blasgame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health beckon the practitioner's attention. Concern for economics of medicine..."

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree, puts him at a disadvantage. Most often, a practicing physician will not have expert knowledge of no more than 2

ould be an obligation of medical
ctice...

"Medical societies ought to con-
t continuing campaigns to point
the substantial savings that could
realized thru deductible insurance
ad protection for catastrophic ill-
ns. At the very least, they should, in
patients' interest, question the
tics of any insurance organization
t raises health care costs by forc-
policyholders to buy insurance
y may not need or want and prob-
ay won't ever use.

"Too many doctors are indiffer-
e to the economic consequences of
ir decisions. Too many, for ex-
ple, habitually hospitalize patients
f the convenience of the MD. It's
sense to deny such habits exist...

"Doctors, thru their medical so-
cieties, have unhesitatingly appealed
their patients for support in the
t against government interference
h the private practice of medicine.
d the public in the past has re-
sponded. It's time the American Med-
ical Association and state and local
medical societies paid off the debt by
cise action to hold down the cost
omedical care."

Cost of Drugs

Insurance rates and hospital
charges are only two factors in health

care costs. The cost of drugs—both
prescription and nonprescription—is
another.

And when it comes to drug
costs, the nation's pharmacists are
concerned. Through their national
professional society, the American
Pharmaceutical Association, pharma-
cists are advising the public to use
nonprescription medication cau-
tiously and conservatively, and to seek
the advice of their pharmacist before
selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware
that when it comes to prescription
drugs, often he has an even greater
opportunity to reduce the cost to the
patient—with no sacrifice in the qual-
ity of the medication dispensed. But
in many states, outdated and anti-
quated laws prevent the pharmacist
from engaging in drug product selec-
tion. "Drug product selection" simply
means that the pharmacist functions
in the patient's interest by con-
sciously choosing, from the multiple
brands available, a low-cost quality
brand of the specific drug to be dis-
pensed in response to the physician's
prescription order.

Much *misinformation* has been
purposely spread by those who stand
to gain financially by maintaining

high drug costs to the public. An end-
less stream of propaganda has ema-
nated from the drug industry in an
effort to persuade the medical profes-
sion that these so-called anti-substitu-
tion laws should be retained. And as
long as these laws are retained, the
drug industry will continue its current
marketing practices which contribute
unnecessarily to high drug costs to
patients. These practices also are in-
viting government agencies to expand
their restrictive controls on physi-
cians and pharmacists.

APhA Efforts

As pharmacists, we are con-
cerned about health care costs. We
hope that every physician shares our
concern on this vital issue, and will
give his personal support to the con-
structive efforts APhA has undertaken
in the interest of all patients.

*(For a complete discussion of
drug product selection, you are invited
to request a free copy of the "White
Paper on the Pharmacist's Role in
Product Selection" from: American
Pharmaceutical Association,
2215 Constitution Avenue, N.W.,
Washington, D.C. 20037.)*

30 drugs that he selects to treat the
majority of conditions encountered in
practice. Moreover, the physi-
cian's choice of a specific brand is
based on his knowledge of the pa-
tient's medical history and current
condition, and his experiences with
that particular manufacturer's
product.

Some substitution proponents
have argued that the dispensing of a
prescription is a simple two-party
transaction between the pharmacist
and the patient, and that a substitut-
ion, pharmacist may avoid even a
technical breach of contract by simply
instructing the patient that he is making
a substitution. I would judge that
courts would be sympathetic
toward a pharmacist who substituted
without physician approval and who
undertook a legal defense that seeks
to make the patient responsible for
the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are
suggesting to the consumer, and par-
ticularly the consumer activist, that
reduced prescription prices could
follow legalization of substitution.
I have seen absolutely no evidence
to justify this claim. To the contrary,
experience in Alberta, Canada, where
substitution is authorized, suggests

the opposite.

Many pharmacists understand-
ably are concerned about the cost of
maintaining multiple stocks of similar
products. While there is no doubt that
inventory costs rise when additional
brands are stocked, it would be inter-
esting to know how much they rise,
and how many pharmacists actually
stock *all* brands—of, say, ampicillin
or tetracycline—or how long they
keep "slow moving" products on their
shelves before they are returned for
credit. To ask that the industry elimi-
nate multiple sources is to ask com-
petitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would
favor "corner cutting" pharmacists
and manufacturers. For them, free
substitution would be not a right, but
a license. As an aftermath, it is quite
likely that the confidence of both phy-
sicians and patients in the profession
of Pharmacy would be eroded, as
revelations about the unconscionable
behavior of an undisciplined few were
magnified in the press or in profes-
sional circles.

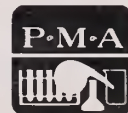
Summary

In short, what the American
Pharmaceutical Association advo-

cates as a broad-spectrum panacea
looks to us to be not only a minority
view (advocacy of substitution is by
no means a uniform policy in Phar-
macy), but also an extraordinarily
costly and ineffective remedy, whose
side effects are odious. We believe
(1) that an impressive majority of
pharmacists prefer to work with
Medicine and with industry, for the
consumer, and for the general good,
(2) that they seek the privilege to sub-
stitute when the patient might gain
and when the patient's doctor agrees,
and (3) that they seek to work for the
resolution of genuine grievances
openly and professionally.

*(For amplification of PMA views,
please write for our booklet, "The
Medications Physicians Prescribe:
Who Shall Determine the Source?"
It is available from: Pharmaceutical
Manufacturers Association, 1155
Fifteenth Street, N.W., Washington,
D.C. 20005.)*

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



House Of Delegates Of The Rhode Island Medical Society

Report of the Meeting of Wednesday, March 7, 1973

A meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Society Library on Wednesday, March 7, 1973. The meeting was called to order by the Vice Speaker of the House, Dr. Thomas F. Head, at 2:10 p.m.

Members in attendance were: Drs. Thomas F. Head, Carl V. Anderson, Robert E. Baute, J. Douglas Nisbet, Joseph E. Wittig, Charles S. Dotterer, Frederick Pierce, Jr., David R. Hallmann, Paul J. M. Healey, Thomas J. Martin, Erwin Siegmund, Leonard S. Staudinger, Robert V. Lewis, Edmund T. Hackman, Stephen J. Hoyer, John P. Grady, D. Richard Baronian, Bertram H. Buxton, Jr., Joseph Caruolo, Nathan Chaset, Joseph D. DiMase, Joseph L. Dowling, Jr., Herbert Ebner, Martin E. Felder, Donald P. Fitzpatrick, Constantine S. Georas, Frank Giunta, Herbert F. Hager, Charles L. Hill, Henry M. Litchman, Vincent I. MacAndrew, Peter

Mathieu, Samir G. Moubayed, P. Joseph Pesare, Ralph F. Pike, Robert P. Sarni, Guy A. Settipane, Richard P. Sexton, George H. Taft, Wilson F. Utter, Elihu S. Wing, Jr., Seebert J. Goldowsky, and Arnold Porter.

Also present were Drs. Earl J. Mara, Andrew Blazar, and legal counsel, Charles Clapp and John Reid, John E. Farrell, executive secretary, Edward J. Lynch, assistant executive secretary, and J. Brendan Wynne, D.O.

Members absent were: Drs. John C. Ham, David Newhall, William J. O'Rourke, Charles B. Round, Richard G. Bertini, Philip J. Lappin, A. John Elliot, James A. McGrath, Joseph L. C. Ruisi, Francis L. Scarpaci, J. Gerald Lamoureux, John A. Dillon, William J. MacDonald, (Illness), George V. Coleman, Dominic L. Coppolino (Illness), Martin Feldman, David Freedman, Edward J. Gauthier, Milton W. Hamolsky, John B. Lawlor, Raul Nodarse (Illness), James A. Reeves, William R. Thompson, Armand D. Versaci, Joseph E. Cannon, and John J. Cunningham.

INTRODUCTION OF GUEST

Doctor Lewis stated that the incorporators of the R. I. Professional Services Review Organization, Inc. had met prior to the House meeting, and included in the six incorporators was Dr. J. Brendan Wynne, a former president of the Rhode Island Society of Osteopathic Physicians and Surgeons. He introduced Doctor Wynne to the House, and invited him to remain for the meeting.

MINUTES OF PREVIOUS MEETING

The Vice Speaker noted that the minutes of the previous meeting of the House had been prepared by the Secretary and distributed to the members.

Action: A motion was made, seconded and voted that the minutes of the January 24, 1973 meeting, as submitted, be approved and placed on record.

REPORT OF SECRETARY

Doctor Hoyer noted that his report was included in the handbook and he offered to answer questions regarding any items listed.

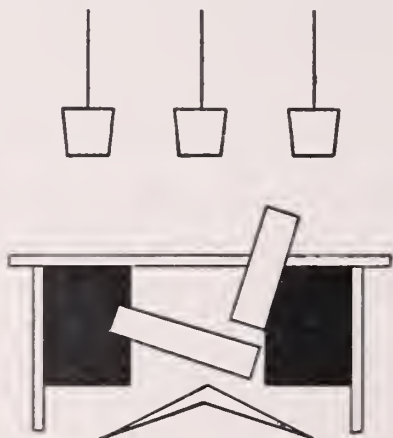
Doctor Lewis reported on the review of the legislation by the Committee on Public Laws, and sub-

(Continued on page 349)

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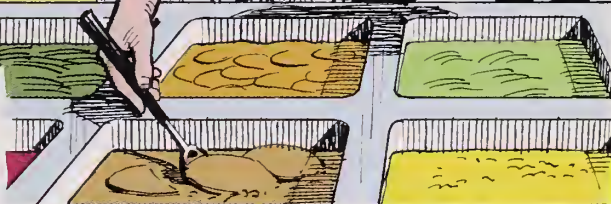
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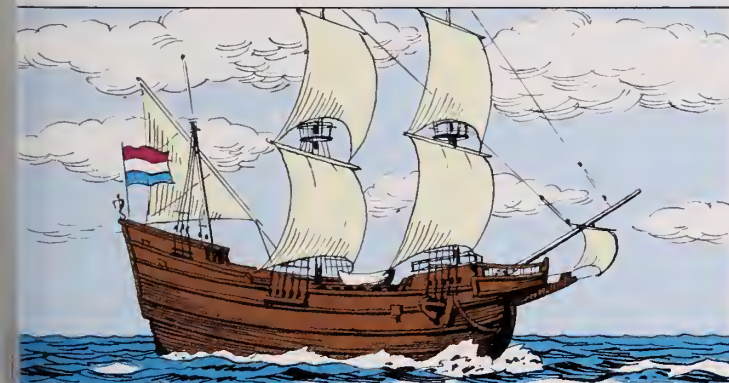
THE COMMON PRACTICE IN MANY RESTAURANTS, HOSPITALS, AND OTHER INSTITUTIONS INCLUDING OLD PEOPLES' HOMES AND NURSING HOMES OF "HOLDING" COOKED FOODS IN STEAM TABLES BEFORE SERVING RESULTS IN A SIZABLE LOSS OF B AND C VITAMINS.



DURING THE CIVIL WAR 30,714 CASES OF SCURVY WERE REPORTED, AND 383 DEATHS WERE ATTRIBUTED DIRECTLY TO THE DISEASE.



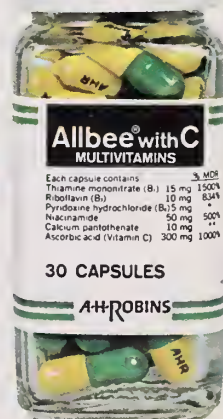
THE AMOUNT OF SUNLIGHT AVAILABLE DURING RIPENING DETERMINES TO A LARGE EXTENT THE FINAL ASCORBIC ACID CONTENT OF TOMATOES. HENCE, A COOL, WET SUMMER PRODUCES WATERY, LESS TASTY FRUIT THAT'S LOWER IN VITAMIN C.



RONSSSENS, A DUTCH PHYSICIAN, WROTE IN 1564 THAT "DUTCH SAILORS WHO, RETURNING FROM SPAIN, WERE ATTRACTED BY THE NOVEL RICHNESS OF THE FRUIT (ORANGES) AND BY THEIR GREED AND GLUTTONY, UNEXPECTEDLY DROVE OUT THE DISEASE (SCURVY), AND HAD THIS HAPPY EXPERIENCE NOT ON A SINGLE OCCASION ONLY, BUT REPEATEDLY."

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Formula



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atropine sulfate	0.0194 mg	0.0194 mg	0.0582 mg
hyoscine hydrobromide	0.0065 mg	0.0065 mg	0.0195 mg
phenobarbital	($\frac{1}{4}$ gr.) 16.2 mg	($\frac{1}{2}$ gr.) 32.4 mg	($\frac{3}{4}$ gr.) 48.6 mg
(warning: may be habit forming)			

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease, obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy) or hypersensitivity to any of the ingredients.

A·H·ROBINS A·H·Robins Company, Richmond, Virginia 23220

HOUSE OF DELEGATES REPORT

(Continued from page 348)

sequently by the Council of the Society which had voted that the President inform the Governor and the Chairman of the House Judiciary Committee of the most recent action, taken in 1970, of the House of Delegates on the subject of legislation relating to abortion.

Action: A motion was made, seconded and voted that the report of the Secretary, as submitted in the handbook, be approved and placed on record.

REPORT OF TREASURER

Dr. John P. Grady, Treasurer, noted that his report was included in the handbook for the meeting, and he offered to answer any questions regarding it.

Action: A motion was made, seconded and voted that the report of the Treasurer, as submitted, be approved and placed on record.

RECOMMENDATIONS OF THE COUNCIL

The Secretary submitted the recommendations from the Council, as published in the handbook for the meeting. Action was taken as follows.

1. *Authorization for the Employment of an Executive Secretary*

Action: A motion was made, seconded and voted that the House authorize the Council to employ an Executive Secretary to succeed Mr. John E. Farrell.

2. *Public Notices by Physicians*

Action: A motion was made, seconded and voted that the regulations, (Appendix B), relating to Public Notices by Physicians be adopted; and further, that the Council promulgate further regulations covering radio and television advertising as well as proper listing in telephone and other directories; and further, that all these regulations apply equally to physicians whether they are practicing as solo physicians, or incorporated physicians, or as physician members of partnerships, associations, foundations, or as employees of them or any incorporated or unincorporated group.

3. *Blue Cross Board Members*

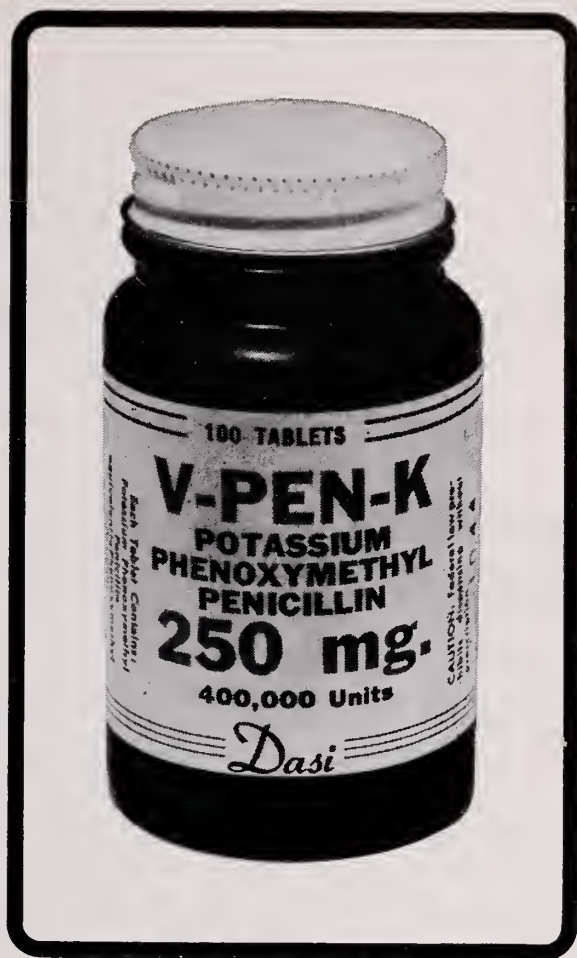
Action: A motion was made, seconded and voted that Drs. Earl J. Mara and Arnold Porter be nominated as the Society's official representatives on the Blue Cross Board of Directors.

4. *Listing of Specialty Groups*

Action: A motion was made, seconded and voted that the specialty groups recognized at this time by the House of Delegates to be eligible to have a representative in the House of Delegates, in accordance with the provision in the amended by-laws to be voted upon at the Annual Meeting on March 14, 1973, be the following:

(Continued on page 353)

SEPTEMBER, 1973



PRESCRIBE IT BY NAME

V·PEN·K

Potassium

Phenoxymethyl

Penicillin

250 mg. Tablets 400,000 units

GENERALLY PRICED

DASI Pharmaceutical

PROVIDENCE, RHODE ISLAND

Recommendations[†] on Combination Live Virus Vaccines

American Academy of Pediatrics

Committee on Infectious Diseases

In the September 15, 1971 AAP Newsletter sent to Academy members, the Committee on Infectious Diseases of the American Academy of Pediatrics stated its recommendations on the use of combination live virus vaccines. After a careful review of available data, the committee concluded that:

- "This information indicates that the products are both safe and effective when used as directed."
- The vaccine "...can, therefore, be recommended with the obvious advantages of reduction in the number of injections for any given child and a concomitant decrease in the required visits to a physician's office or clinic."

[†]For complete text of both recommendations see your MSD representative or write to Professional Service Dept., Merck Sharp & Dohme, West Point, Pa. 19486.

United States Public Health Service

Advisory Committee on Immunization Practices

In the April 24, 1971 issue of *Morbidity and Mortality Weekly Report*, the Advisory Committee on Immunization Practices of the United States Public Health Service presented recommendations on the use of combination live virus vaccines. The committee stated that:

- "Data indicate that antibody response to each component of these combination vaccines is comparable with antibody response to the individual vaccines given separately."
- "There is no evidence that adverse reactions to the combined products occur more frequently or are more severe than known reactions to the individual vaccines (see pertinent ACIP recommendations)."
- "The obvious convenience of giving already selected antigens in combined form should encourage consideration of using these products when appropriate."



M-M-R^{*}

(MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE | MSD)

Single-dose vials

M-M-R, given in a single injection, fits easily into your routine immunization program for well babies. Given at age 12 months, M-M-R provides for vaccination early in life against measles, mumps, and rubella.

MSD suggested immunization schedule for well babies	
Age	Vaccine(s)
2 months	DPT (diphtheria-pertussis-tetanus) Oral poliomyelitis vaccine (triple)
3 months	DPT ¹
4 months	DPT Oral poliomyelitis vaccine (triple)
6 months	Oral poliomyelitis vaccine (triple)
12 MONTHS	M-M-R (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE, MSD)

1. This vaccination may be given at 3 months, 5 months, or at 6 months, depending on your preference or on the condition of the child. Since vaccination with a live virus vaccine may depress the results of a tuberculin test for four weeks or longer, the test and the vaccine should not be given during the same office visit.

^{*}Trademark of Merck & Co., INC.

For a brief summary of prescribing information, please see following page.

M-M-R

(MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE | MSD)

Single-dose vials

No untoward reactions peculiar to the combination vaccine (M-M-R) have been reported.

Moderate fever (101-102.9 F) occurs occasionally. High fever (over 103 F) occurs less commonly. On rare occasions, children who develop fever may exhibit febrile convulsions. Rash (usually minimal and without generalized distribution) may occur infrequently.

Since clinical experience with measles, mumps, and rubella virus vaccines given individually indicates that very rarely encephalitis and other nervous system reactions have occurred, such reactions may also occur with M-M-R. A cause and effect relationship, however,

has not been established.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Must not be given to women who are pregnant or who might become pregnant within three months following vaccination.

Contraindications: Pregnancy or possibility of pregnancy within three months following vaccination; infants less than one year old; sensitivity to chicken or duck, chicken or duck eggs or feathers, or neomycin; any febrile respiratory illness or other active febrile infection; active untreated tuberculosis; therapy with ACTH, corticosteroids, irradiation, alkylating agents, or antimetabolites; blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic systems; gamma globulin deficiency, i.e., agammaglobulinemia, hypogammaglobulinemia, and dysgammaglobulinemia.

Precautions: Administer subcutaneously; do not give intravenously. Epinephrine should be available for immediate use should an anaphylactoid reaction occur. Should not be given less than one month before or after immunization with other live virus vaccines; vaccination should be deferred for at least six weeks following blood transfusions or administration of more than 0.02 cc immune serum globulin (human) per pound of body weight, or human plasma.

Due caution should be employed in children with a history of febrile convulsions, cerebral injury, or any other condition in which stress due to fever should be avoided. The physician should be alert to the temperature elevation which may occur after vaccination.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Attenuated live virus measles and mumps vaccines, given separately, may temporarily depress tuberculin skin sensitivity; therefore, if a tuberculin test is to be done, it should be scheduled before vaccination, to avoid the possibility of a false negative response.

Before reconstitution, refrigerate vaccine at 2-8 C (35.6-46.4 F) and protect from light. Use only diluent supplied to reconstitute vaccine. If not used immediately, return reconstituted vaccine to refrigerator at 2-8 C (35.6-46.4 F), and discard after eight hours.

Adverse Reactions: Fever, rash; mild local reactions such as erythema, induration, tenderness, regional lymphadenopathy; parotitis; thrombocytopenia and purpura; allergic reactions such as urticaria; arthritis, arthralgia, and polyneuritis.

Occasionally, moderate fever (101-102.9 F); less commonly, high fever (above 103 F); rarely, febrile convulsions.

Encephalitis and other nervous system reactions that have occurred very rarely with the individual vaccines may also occur with the combined vaccine.

Transient arthritis, arthralgia, and polyneuritis are features of natural rubella and vary in frequency and severity with age and sex, being greatest in adult females and least in prepubertal children. Such reactions have been reported with live attenuated rubella virus vaccines. Symptoms relating to joints (pain, swelling, stiffness, etc.) and to peripheral nerves (pain, numbness, tingling, etc.) occurring within approximately two months after immunization should be considered as possibly vaccine related. Symptoms have generally been mild and of no more than three days' duration. The incidence in prepubertal children would appear to be less than 1% for reactions that would interfere with normal activity or necessitate medical attention.

How Supplied: Single-dose vials of lyophilized vaccine, containing when reconstituted not less than 1,000 TCID₅₀ (tissue culture infectious doses) of measles virus vaccine, live, attenuated, 5,000 TCID₅₀ of mumps virus vaccine, live, and 1,000 TCID₅₀ of rubella virus vaccine, live, expressed in terms of the assigned titer of the NIH Reference Measles, Mumps, and Rubella Viruses, and approximately 25 mcg neomycin, with a disposable syringe containing diluent and fitted with a 25-gauge, 5/8" needle. Also in boxes of 10 single-dose vials nested in a pop-out tray with a separate box of 10 diluent-containing syringes.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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HOUSE OF DELEGATES REPORT

(Continued from page 349)

1. R. I. Society of Internal Medicine
(To include also the R. I. Gastroenterological Society)
2. Rhode Island Chapter, American College of Surgeons
3. Rhode Island Section, American College of Obstetricians and Gynecologists
4. Rhode Island Orthopaedic Society
5. Rhode Island Radiological Society
6. Rhode Island Chapter, American Academy of Pediatrics
7. Rhode Island Chapter, American Academy of Family Practice
8. Rhode Island Society of Pathologists, Inc.
9. Rhode Island District Branch, American Psychiatric Assoc.
10. Rhode Island Society of Anesthesiologists
11. Rhode Island Association of Emergency Room Physicians
12. Rhode Island Dermatological Society
13. Rhode Island Society of Allergy
14. Rhode Island Ophthalmological Society
15. Rhode Island Otolaryngological Society
16. Providence Surgical Society
5. *New AMA Medicredit Bill*

Action: The House voted to endorse and support the new Medicredit legislation of the American Medical Association which has been submitted to the Congress.

6. *Cancer Detection Program*

Action: A motion was made, seconded and voted that the proposed demonstration project for the earlier detection of breast cancer, which would be funded by the American Cancer Society and the National Cancer Institute, be approved.

7. *Slate of Officers and Standing Committees*

No counter nominations were offered to the slate

(Continued on next page)

ERRATUM

George R. Dunlop, M.D., of Worcester, Massachusetts, is the current Chairman of the Board of Directors of the National Association of Blue Shield Plans and the Vice Chairman of the Board of Regents of the American College of Surgeons. Doctor Dunlop was listed erroneously in the August, 1973 issue of the Journal as the Chairman of the Board of the American College of Surgeons and Vice Chairman of the Board of Directors of the National Association of Blue Shield Plans. The Editors regret this error.

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

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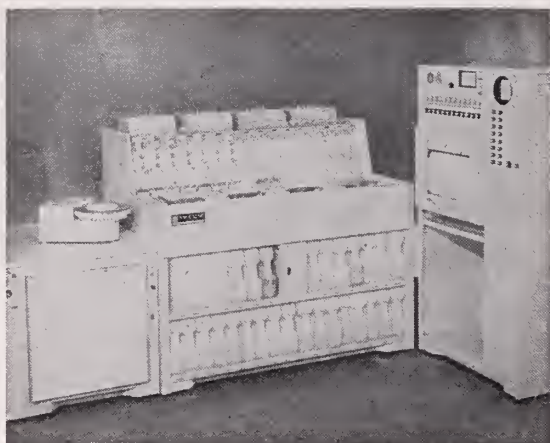
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ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

of Officers and Standing Committees proposed by the Council.

Action: A motion was made, seconded and voted that the slate of nominees for Officers and Standing Committees, as submitted, be elected.

BI-CENTENNIAL COMMITTEE

Doctor Goldowsky reported on meetings he had attended of the Rhode Island Committee to plan the Nation's bi-centennial in 1976. He stated the Commission has funds available, and possibly the Society might be interested in seeking an appropriation for a health project, such as a public Health Fair as was held by the Society in 1962. He also suggested that the Committee be expanded and that a new Chairman be named.

U. S. PHARMACOPEIAL CONVENTION

Doctor Lewis reported that the Society had been asked to name a delegate to the U.S. Pharmacopeial Convention which meets every five years, unless for special sessions in the interim years. He recommended Dr. Richard K. Mead as delegate, and Dr. Edward A. Iannuccilli as alternate delegate.

Action: A motion was made, seconded and voted that Dr. Richard K. Mead be named delegate, and Dr. Edward A. Iannuccilli as alternate delegate from the Society to the United States Pharmacopeial Convention.

GREETINGS TO DR. RAUL NODARSE

Doctor Lewis noted that Dr. Raul Nodarse, long a member of the House, was still confined to a New York hospital where he is convalescing from an injury sustained in December.

Action: A motion was made, seconded and voted that the House extend its best wishes to Doctor Nodarse, and its hope that he will attend the September meeting of the House.

COMMENDATION OF DR. LEWIS

Dr. Stephen Hoyer paid tribute to Dr. Robert V. Lewis for his outstanding leadership of the Society, and he moved for House action.

Action: A motion was made, seconded and voted that the House of Delegates record its commendation of Dr. Robert V. Lewis for his outstanding leadership of the Society during 1972-73.

AMA DRUG COMMITTEE

Dr. Henry Lichtman commented on the action of the American Medical Association in eliminating its drug committee, and he questioned whether the House should take action on the matter.

Doctor Goldowsky reported that the AMA plans to continue its department on drugs, and issue its

(Continued on page 356)

when manhood ebbs...

due to testicular deficiency

Halotestin® 5 mg tablets

fluoxymesterone, Upjohn oral hormone replacement

*"When impotence is the principal complaint of a patient, it is usually the result of an emotional disturbance, in which case androgen therapy is valueless and at times may add to the psychic trauma."**

Halotestin® Tablets—2, 5 and 10 mg
(fluoxymesterone Tablets, U.S.P., Upjohn)

Indications in the male: Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration. 1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

In the female: 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

Contraindications: Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

Warnings: Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

Adverse Reactions: Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

How Supplied:

2 mg—bottles of 100 scored tablets.

5 mg—bottles of 50 scored tablets.

10 mg—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

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*Cecil-Loeb. Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermott, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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HOUSE OF DELEGATES REPORT

(Continued from page 354)

manual for physicians, but under a curtailment of committees' program it was only dropping its Council on Drugs.

THE ISSUE OF ABORTION

Doctor Blazar reopened the issue of abortion legislation.

Dr. Bertram H. Buxton discussed the many issues involved in the federal court decision and state legislative proposals. No action was taken by the House.

EYE CARE PROGRAM

Dr. Joseph Dowling discussed the matter of eye care programs by optometrists under the sponsorship of third party prepayment organizations, particularly Blue Cross-Blue Shield. He stated that the Rhode Island Ophthalmological Society was opposed to such program that excludes services by ophthalmologists.

Action: A motion was made, seconded and voted that the House record its opposition to eye care plans under the sponsorship of any prepaid third party where the services would be performed only by optometrists.

APPOINTMENT OF COMMISSIONERS

Dr. Edmund T. Hackman, President-Elect stated that if the membership approves the bylaw revisions at the Annual Meeting on March 14 he would be authorized to name five Commissioners under the reorganization plan. He asked the House for approval of the following physicians to serve as Commissioners: Commission on Community Relations; Richard P. Sexton, M.D.; Commission on Health Programs; Thomas F. Head, M.D.; Commission on Professional Relations; Leonard S. Staudinger, M.D.; Commission on Socio-Economics; Kenneth Liffman, M.D.; Commission on Public Health; Frank W. Sullivan, M.D.

Action: A motion was made, seconded and voted that the nominees submitted by Doctor Hackman be approved, contingent upon favorable action by the membership on the revised by-laws on March 14, 1973.

REPORT OF THE TRUSTEES OF THE MEDICAL SOCIETY

The Vice Speaker noted that the report of the Trustees of the Medical Library was included in the handbook for the meeting.

(Continued on page 375)

PEDIATRIC SYMPOSIUM ON INFECTIOUS DISEASES

The Tenth Annual Maurice N. Kay Pediatric Symposium, entitled "NEW DEVELOPMENTS IN INFECTIOUS DISEASES," will be presented at the Roger Williams General Hospital, Providence, Rhode Island by the Department of Pediatrics on Wednesday, October 31, 1973 from 10:00 a.m. to 5:00 p.m. Moderator of the program will be Dr. Georges Peter, Brown University, Providence. Guest Speakers will include: Drs. Floyd Deiny, University of North Carolina School of Medicine, Chapel Hill; Keith Drummond, McGill University, Montreal; Samuel Katz, Duke University Medical School, Durham; Saul Krugman, New York University School of Medicine, New York; and Stephen Zinner, Brown University, Providence.

For further information, write Mary B. Arnold, M.D., Acting Chairman, Department of Pediatrics, Roger Williams General Hospital, 825 Chalkstone Avenue, Providence, Rhode Island 02908. No registration fee.



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Remarks Of The President

The Medical Society Forsees A Role In The Accreditation Of Continuing Education Programs

by Robert V. Lewis, M.D.

It is most appropriate that we meet today in the library of the Rhode Island Medical Society. Our meeting here documents in a very concrete and tangible way the fact that continuing medical education and the diffusion of current knowledge are not new, but are in the traditional historical pattern of organized medicine. The presence of our medical librarians emphasizes the role of the library as a repository of the current literature and a very important source of continuing education, one that is so much taken for granted or frequently overlooked entirely.

Overlooked also to a very large measure is the interest that physicians have in improving their technical skills, not only because of their moral obligation to render the most knowledgeable and competent care to their patients, but also for the intellectual rewards inherent in self-improvement and education. Thus, our seminar this morning is not on a new subject, but on one synonymous with the words "practice of medicine," which can only

ROBERT V. LEWIS, M.D., of Providence, Rhode Island, Senior Physician, Rhode Island Hospital; Immediate Past President, The Rhode Island Medical Society.

Read at meeting on the Continuing Medical Education Program of the Rhode Island Medical Society, October 14, 1972.

be defined as the constantly repetitive performance of a psychological transaction with ever-increasing skill and proficiency. Our attention this morning then is not on new *concepts* or *philosophy*, but rather on new tactics and techniques. For that reason I welcome to this meeting the hospital administrators, that they may be encouraged to support these new techniques and give us the funding for the necessary tools and programs. Thus we may bring into full and practical use the ideals of continuing education.

TRADITIONAL ROLE OF ORGANIZED MEDICINE

There are several clichés and misconceptions bandied about which should be put in their proper place. The first is the mistaken notion that concern for competence is new. The Rhode Island Medical Society was founded out of concern for competence and in order to promote continuing competence. For its first 100 years the Rhode Island Medical Society was the only medical regulatory body in the state. After 15 years of urging and prodding by the Rhode Island Medical Society the state legislature eventually passed the first licensing acts. It is a grave misconception among lay persons misled by the press that concern for the competence of physicians is a newly conceived concern of consumers, or that symposia such as this are the result

(Continued on next page)

of prodding by the public. Most of you are knowledgeable concerning the practice of medicine and realize that the division of our hospital staffs into services and the granting of privileges within those departments is based to a very large extent on proven competence as evidenced by specialty board examinations, themselves a product of the profession's concern with self-improvement. Most importantly, the public should realize that physicians voluntarily have submitted to the continuing education process, and proof of competence which these boards require.

The existence of the specialty boards precludes any simplistic approach to continuing medical education. We have recently moved to include representatives of the specialty organizations in the House of Delegates of the Rhode Island Medical Society. Our initial list will include between 10 and 20 recognized specialty societies. It is quite clear that any program for continuing medical education must be considered within the context of specialization. Under such restrictions no legislative body could legislate a simple program titled "Continuing Education" which would have any relevance to relicensing or be considered a criterion of competence for a group as diverse as the medical profession in the contemporary scene.

A second major problem which I see in continuing medical education and the assessment of competence is the scatter due to the normal distribution of individuals within any specialty group or category. With respect to age alone we are talking about a very diverse group of physicians with roughly a 40 year age span from age 30 to 70. Physiological processes of learning, retention, and motivation are widely scattered. Continuing medical education is a generic term with little reference to either genus or species.

HALF-LIFE OF KNOWLEDGE

Before concluding I should like to comment very briefly on two other widely discussed matters pertinent to our subject. The first is on the "half-life of acquired knowledge." This is often considered to be a new concept or at least newly discovered. In a sweeping generalization the demand is made that, because the knowledge that one acquires at a given point is lost in a period of 5 to 12 years, the physician should continually restore this knowledge by continuing education. The facts about forgetting are well known. What is not equally understood as a corollary is that the knowledge necessary for the everyday practice of medicine is constantly recalled, refined, and made more effective by continuous

psychological reinforcement. The knowledge which is lost is that which, because it lacks relevance, has not been used. As with all unused physiological functions, this part of knowledge atrophies. For example, there are few in this room who at one time were not capable of translating Caesar, or to write out in great detail the arguments and plots of at least two Shakespearian plays. Only the Shakespearian scholar or the classics teacher continues by his "on-the-job training" to maintain this knowledge. The physician's on-the-job training is known as the "practice of medicine."

EXPLOSION OF MEDICAL KNOWLEDGE

"The explosion of medical knowledge" is another cliché invoked for the purpose of demanding continuing medical education. This can only be considered intellectually by studying Kuhn's classic "The Structure of Scientific Revolutions." Revolutionary new concepts in all scientific endeavors Kuhn refers to as paradigms. As he clearly shows, these paradigms do not come with the rapidity of machine gun fire. New paradigms do not occur weekly. Much of the explosion of medical knowledge constitutes merely additions to a large corpus of information and knowledge added to old paradigms, thus adding merely redundancy. Much of the proliferation in medical journals and educational programs is an increase in redundancy. An Audio-Digest recording of a recent seminar on diabetes at Johns Hopkins Hospital clearly illustrates this. The new paradigm or breakthrough in the understanding and treatment of diabetes was the discovery of insulin 50 years ago. True, we now have some refinements of insulin, but basically a man who has taught and learned basic diabetes and its practical management 25 years ago has added no real competence to his management of diabetes despite the vast corpus of knowledge which has, to be sure, defined the structure of insulin and its mode of action in muscle and liver. In judging a man's competence and his decision-making ability, his knowledge of the amino acid sequences of the insulin molecule is no measure. The treatment of cardiac arrhythmias may be another example. In the past 10 years probably only two significant developments have occurred; one is the use of lidocaine, the other the use of electric cardioversion. In other specialties the situation is similar. Simply stated, to be a competent clinician does not mean that one must be familiar with all of the accumulating redundancy, but only that which has pertinence to the job; that which has pertinence is con-

(Concluded on page 386)

Continuing Education Program Of The Rhode Island Medical Society

Feasibility Of Developing A Program For Accreditation Of Continuing Medical Education Programs Will Be Explored

by Henry S. M. Uhl, M.D.

In 1970, the Committee on Continuing Medical Education of the Rhode Island Medical Society, in response to growing national pressures for the establishment of compulsory continuing medical education for all physicians to maintain their state society memberships and, in some cases, to qualify for state relicensure or for recertification in a specialty of medicine, recommended to the House of Delegates that the Society adopt a positive stance and go on record in opposition to mandatory participation in educational programs and to any negative incentives in continuing medical education. It recommended that the House of Delegates authorize the Committee to explore positive incentives and that the Committee be delegated the responsibility by the Society to review national problems concerning continuing medical education, recertifi-

HENRY S. M. UHL, M.D., of Providence, Rhode Island, Former Director of Professional Affairs, St. Joseph's Hospital, Providence, Rhode Island; Former Chairman, Continuing Medical Education Committee, Rhode Island Medical Society, Providence, Rhode Island.

Read at Meeting on the Continuing Medical Education Program of the Rhode Island Medical Society, October 14, 1972.

cation, and relicensure of physicians, and that the Committee present a seminar on continuing medical education under the sponsorship of the Society open to its entire membership. These recommendations in the form of a resolution were approved by the House of Delegates on January 20, 1971.

The Committee organized the first of a series of annual programs on continuing medical education, held September 18, 1971, in Newport, Rhode Island. The conference included distinguished guest speakers from the New England area, from Alabama and Pennsylvania, and from the office of the American Medical Association. The central theme of this conference was stated as follows:

"Physician competence is a fundamental element of quality medical care, and, likewise, medical education is basic to competence. Medical education's goal is the production of physicians equipped to provide optimal care for the public. The ultimate evaluation of an educational system is the effectiveness of its products. Questions raised about quality of care and professional competence are ones of primary interest to medical education. The growing problem of malpractice suits gives added impetus to this issue."

(Continued on next page)

(Quoted from an official statement by the American Medical Association)

Following this successful conference the Committee recommended that a second annual seminar be held in the Fall of 1972. The Committee also agreed that it would support the positive approach to continuing medical education embodied in the concepts of peer review, and that the punitive thrusts of medical audit review mechanisms should be avoided. The Committee endorsed the concepts as described at its conference by C. R. Brown, Jr., M.D., and S. E. Goldfinger, M.D., in which continuing education was based in the community hospital and educational programs were designed specifically to meet the identified needs of the individual hospitals and their medical staffs. The Committee reaffirmed its position in opposition to mandatory continuing medical education programs and agreed that the Rhode Island Medical Society should strengthen its relationships with individual hospitals and county medical societies and should work with the educational institutions in the state to take advantage of their expertise and resources. These conclusions of the Committee were embodied in an official report to the House of Delegates, approved March 8, 1972.

At the time the Committee on Continuing Medical Education was developing these recommendations and obtaining the endorsement of the Rhode Island Medical Society, the Division of Continuing Medical Education of the American Medical Association was developing new mechanisms to provide for accreditation of continuing education programs within each individual state by an appropriate agency or organization sponsored by the state medical society. The Committee decided to devote its second annual seminar to a review of the feasibility of developing such a new program for accreditation of continuing medical education in Rhode Island. Rutledge Howard, M.D., Associate Director, Division of Education of the American Medical Association, and responsible for continuing medical education, was invited as the chief speaker. Doctor Howard's paper, included in the series selected from this conference for publication, is a comprehensive and important document for all members of the state medical society.

The position of the American Medical Association in regard to continuing medical education is stated succinctly in its brochure "Essentials of Approved Programs in Continuing Medical Education," adopted by the AMA House of Delegates in

June 1970. This concise document defines continuing medical education, states appropriate objectives, and analyzes a list of basic principles which each program must demonstrate if it is to be officially approved. These include:

- (1) Effective administration by a responsible person.
- (2) An adequate budget to sustain the program and to lead to its continuing improvement.
- (3) A teaching staff of physicians and their associates of unquestioned ability and with the proper training and experience to provide carefully planned programs.
- (4) A curriculum properly designed to explore in depth one subject or a closely related group of subjects.
- (5) Educational facilities that would encourage participation in the educational activity by physicians and other health professionals involved. Facilities usually are found in hospitals, medical schools, or other related educational institutions.
- (6) The education methods should include more than lectures or panel discussions, in an effort to involve the students actively in live clinics and bedside rounds, in open and free discussion and exchange of ideas, and even laboratory work and the study of patients under supervision. Emphasis upon problem solving is likely to increase student involvement.
- (7) Methods of evaluation of the effectiveness of these programs should be developed and used as a part of each program. The evaluation should be based upon the careful preparation of the specific objectives of each program and should be related to the purpose of education which is to develop changes in the attitude and behavior of the learner in reaching the solution to identified medical problems.
- (8) There should be an appropriate reward for each physician who participates, and this could be the intrinsic reward of improved ability in the care of patients and external awards, such as special certificates or the Physician's Recognition Award of the American Medical Association.

The Physician's Recognition Award is provided to any licensed Physician who can demonstrate that he has fulfilled criteria for participation in varied kinds of educational activities. The American Medical Association has established specific criteria related to total credit hour requirements. The

six categories in which continuing medical education activities are creditable for the 1972 Award include activities with 1) accredited sponsorship (such as those by a medical school, a teaching hospital or a specialty society), (2) continuing medical education activities of non-accredited sponsorship, (3) medical teaching activities, (4) paper publications, books, and exhibits, (5) non-supervised individual continuing medical education activities and (6) other meritorious learning experiences. The details of the required participation and activities under these various categories are contained in the pamphlet titled "The Physician's Recognition Award" published by the Department of Continuing Medical Education of the American Medical Association.

In closing these introductory comments, I believe it is perhaps worth noting that at the most recent annual national meeting on continuing medical education sponsored by the American Medical Association in Chicago (Oct. 24-26, 1972) a fact sheet was provided, indicating that six states have made a policy decision to require continuing medical education as a condition for membership (these states are Oregon, Arizona, Pennsylvania, New Jersey, Massachusetts, and Florida, in order of initiation of this requirement). One state now requires continuing education for relicensure every five years (New Mexico), and two other states are giving consideration to this policy (Kansas and New Jersey). Only one specialty society has a requirement for continuing medical education for membership and only one society for recertification, that is the American Academy of Family Physicians. Eight state medical societies or associations have now been approved by the Council on Medical Education for the accreditation of organizations or institutions sponsoring continuing medical education programs within their own states. Finally, the Physician's Recognition Award can provide a means for documenting continuing medical education for all physicians in any field of medicine. Programs for certifying continuing medical education are in operation in the states of Oregon, Arizona, Pennsylvania and California. The criteria for certification adopted by the Pennsylvania Medical Society are identical to those of the Award. The Award Program endorses the continuing medical education certification programs for the American Board of Family Medicine and for state medical societies (Oregon, Arizona, Pennsylvania, and California).

In conclusion, the Committee on Continuing Med-

ical Education wishes to express its deep concern for the development of programs based in community hospitals which would take full advantage of educational resources in the state, especially in relation to the developing medical school at Brown University, and in relation to the special resources for educational methodology and techniques and education in allied health fields at the University of Rhode Island and at Rhode Island College. The Committee believes that external pressures will continue to be exerted upon the profession through state legislatures and through the federal government, as well as through consumer advocate groups, and that it will be in the best interests of the profession to develop its own programs which it can accredit according to appropriate professional standards.



Pandora's Box

Hesiod called women a necessary evil and related the myth of Pandora which holds her responsible for the ills of the world.

. . . Richard Gilman, in article on The Woman Problem in Life magazine.

* * *

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Accreditation Of Continuing Medical Education At The State Level

State Level Accreditation, A Goal Of The AMA, Can Have A Number Of Favorable Consequences

By Rutledge W. Howard, M.D.

It gives me a great sense of appreciation to be able to present some current ideas on accreditation of continuing medical education by state medical associations. With a background which has varied from teaching physical diagnosis in surgery in New England to a private solo rural practice in New York State, I am likely to have some strong personal viewpoints. I hope they will not be too illogical.

About five years ago it was apparent that continuing medical education was beginning to show signs of greatly increased activity and somewhat greater maturity. In the several preceding decades continuing education for physicians had varied from a reparative form following the Flexner report in 1910 and the development of specialties in the first half of this century to more specialized continuing education aimed at the various specialties and general practitioners. Formal continuing education began also to become related to the behavioral sciences

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and more particularly to the logical development of determined educational needs, suitable participative learning techniques, and stronger efforts to develop evaluation of behavioral change in practice habits as a result of continuing medical education.

At this point I should like to bring to your attention some of the external influences which appear to affect the somewhat chaotic system of continuing medical education as it exists at present. Also, it will be worthwhile reviewing briefly the hopes of the AMA Council on Medical Education that state medical societies will be able to set up their own programs of accreditation, using the proven guidelines developed for this purpose. Next it be worthwhile to describe the *advantages* of accreditation at the state level: the *method* by which a state medical society can develop its own accrediting mechanism; and to same extent the unique position of *community hospitals* in continuing medical education.

EXTERNAL INFLUENCES

First, let us look at external influences. Almost five years ago in November 1967, the National Advisory Commission on Health Manpower issued its report to the nation. The part of this report of most interest to us in continuing medical education deals with its recommendation concerning continu-

ing education and relicensure of health professionals. The Commission noted that the increasing pace of medical advances has rendered inadequate the older means of assuring that physicians will use the best techniques and information available. It stressed that the physician's education *must* be continued as long as he practices. Otherwise, the physician will be unaware of new developments and will probably continue to use outdated techniques of diagnosis and treatment which would be far less effective in improving the quality of health care than if he had made strong efforts at self-renewal.

There are certain features of the Commission's report which should be restated at this time. First, the Commission noted that the simple deed of making educational opportunities available to the physician will not assure his utilization of such opportunity unless sufficient incentives are provided. Among these incentives would be the periodic relicensure of health professionals, including physicians, on the basis of acceptable performance in continuing education. The Commission also noted that an alternative way for the health professional to document his self-renewal would be for him to take a challenge examination in his specialty.

Here the Commission pointed out the many potential drawbacks to the proposal for relicensing. Among the drawbacks the Commission noted would be the need for safeguards against abuse. It also presented the fact that many existing programs of continuing medical education are quite inadequate in both content and geographic distribution to serve as a basis for relicensure. It noted that new programs would need to be developed and presented in such a way that they would be tailored to the location and time requirements of busy practitioners. It also realized that the institution of any relicensure requirement might have to be prospective and applied only to those who enter professional schools *after* the start of such a new requirement. The Commission also expressed its opinion regarding accreditation, pointing out that, if continuing education *should* become a basis for relicensure, a mechanism would have to be developed to *accredit* these new programs professionally. In this relationship, and I believe this is another key to their thinking, the report of the Commission stated that *professional* societies as well as state governments should explore these possibilities of relicensure based upon continuing medical education.

The Commission's report has undoubtedly been

a strong external influence in the field of continuing medical education.

Another motivating force has been the establishment in December 1970 by the Joint Commission of Accreditation of Hospitals of a new and important standard. This new standard of the JCAH requires that the medical staff of a hospital seeking accreditation by the Joint Commission should provide a continuing education program for its professional staff, or that the medical staff shall give evidence of participation in such a program.

Probably a less noticed but equally important external force has been the growth of hospital medical education and the increasing desire of medical staffs to seek continuing self-renewal, close to their places of work, related to solving their own patients problems, and available at a time, place, and pace of the physician's own choice.

The strongest interest of the Association for Hospital Medical Education in and the growing awareness of many medical school administrators of the importance of continuing medical education have played a very strong role.

AMA INVOLVEMENT

The strengthening of continuing medical education has also been reinforced by the American Medical Association Council on Medical Education.

For more than a decade, the AMA has been giving close attention to its role in continuing medical education. With a history of having developed, in conjunction with other organizations, accreditation of undergraduate medical education at the medical schools and graduate medical education during the internships and residencies, the AMA has worked at ways and means of increasing the development of relevant and meaningful continuing medical education.

In 1961 the AMA Council established a permanent standing committee as a successor to an earlier ad hoc committee on continuing medical education. The Committee was charged at an early date with the need to explore the problems of continuing medical education. Following this it set up and implemented a feasibility study of accreditation in continuing medical education. Beginning about 11 years ago, with an initial 20 surveys staffed largely by Doctor Carl Henry William Ruhe of the AMA, a set of guidelines was developed to serve as an aid to individuals and institutions which desired to plan and produce continuing medical education. After several revisions these guidelines were developed into the "Essentials of Approved Programs

(Continued on next page)

in Continuing Medical Education." The objectives and principles described in the "Essentials" had actually been put to the test and, with strong input from a great number of individuals outside the AMA, has been refined for general use in planning, implementing, and surveying continuing medical education programs.

The AMA program of accreditation in continuing medical education has developed along the same lines as accreditation of *medical schools* and programs of *graduate* medical education. It is a *voluntary* program which any educational institution or organization may wish to use. At present the AMA Council on Medical Education, through its staff at AMA headquarters, is willing to undertake surveys for accreditation of continuing medical education programs at medical schools, national medical specialty societies, national voluntary health organizations, and other institutions and organizations which provide national or multi-state continuing education activities.

INCREASED HOSPITAL INTEREST IN ACCREDITATION

About two years ago it was noted that an increasing number of hospitals, especially those which are not affiliated with medical schools, were becoming interested in seeking surveys for accreditation. We have already alluded to the Joint Commission's new requirement about medical staff opportunities for continuing medical education at hospitals. Possibly the community hospital interest in accreditation in this field was related to the Joint Commission's new standard established at that time.

The AMA Council, also about two years ago, after long study realized that community hospitals which offer continuing medical education, largely for their own medical staffs and nearby physicians in the community, would probably have better surveys for accreditation or at least more *relevant* surveys of a grass-roots nature if the surveys could be carried out by a more local structure than the AMA Council itself.

STATE MEDICAL SOCIETY ACCREDITATION

Accordingly, the AMA Council established a policy whereby it would strongly encourage state medical societies to set up their own accrediting programs for community hospitals and other local organizations in the field of continuing medical education. Guidelines to assist state medical societies in setting up their own accreditation programs were developed by staff and approved by the AMA Council and its Advisory Committee. The guidelines

are quite simple, asking that the state medical society set up its own plan for accrediting community hospitals. In doing this the state medical society would develop its own "Essentials" based on the AMA Essentials, but expressed in terms more closely related to the accreditation aspects of community hospitals and other locally focused institutions. In addition to developing its own *Guidelines* or Essentials, the state medical society would also develop its own *presurvey questionnaire*, again more realistic for the community hospital than the presurvey questionnaire of the AMA. A third document which the state society would prepare would be a team report form, or content list, to guide the survey teams sent to the community hospitals requesting a survey for accreditation.

In addition the state society would by this time have established its own Committee on Education, hopefully with the membership including participating physicians, medical school experts, specialty society experts, and possibly others with strongly developed interests in continuing medical education, particularly such individuals as hospital directors of medical education. The education committee of the state medical society could serve as a state-level accrediting body under the auspices of the AMA Council. To accomplish this the state society, following the development of its own three basic documents (the Essentials, the presurvey questionnaire, and the team report content list) would submit these documents through the AMA Advisory Committee to the AMA Council on Medical Education. The Council would review them for suitability and give its stamp of approval to the state medical society to conduct its own accrediting program of local institutions offering continuing medical education.

Initial Council approval of the state medical society plan has customarily been granted as a provisional approval good for one year. During this year the state society would be encouraged to carry out several surveys of community hospitals or other local organizations which were already offering continuing medical education. As in the case of the AMA, the state society would probably call upon volunteer surveyors to do the job, so there could be a strong interchange between these volunteers surveyors and the program directors of continuing education of the community hospitals. The surveyors would be consultants, not inquisitors. The state society education committee, either directly or through a subcommittee, could review the reports of the Survey Teams at three month intervals, and

the education committee could take accrediting action based upon these reviews.

After a year of effort in implementing its own accrediting program, the state medical society would then prepare a progress report of the total accrediting activities of the state society.

Following careful consideration of the experience of the state society during its first year of accrediting, the AMA Council could then determine if the state society accrediting program should be approved for a longer period, currently established at a maximum of four years.

Let us go back a bit to the first year during which the state society implements its accrediting program. On one of the first surveys conducted by the state society, the AMA Council would have one of its staff and one of its Advisory Committee members present during a state society survey for accreditation, not as a "big brother," but to guide and assist the state society's own survey team in its early efforts. These two individuals representing the AMA would also be present during an early meeting of the state society review committee to guide it in its approach to the team report review.

Also built into the state society accrediting mechanism would be the need for the state society staff to identify those individuals within the state who could serve as potential survey team members, and to identify the continuing educational programs of individual community hospitals and other local institutions which either were already producing or had the potential to produce good quality continuing medical education.

At this point I should like briefly to mention some of the unique features of local institutions, especially community hospitals in continuing medical education.

COMMUNITY HOSPITAL PROGRAMS

Those of us interested in community hospital continuing education are beginning to find more company. Many additional individual educators and physicians are joining the ranks, but in no sense is the field too crowded. While medical schools are the logical ultimate resource centers for the development of medical advances, with the help of clinical faculties in the various specialties, the logical place for realistic learning exchange, it seems to me, is where the action is, where the physician sees his patients. In other words the action is largely at the hospital and in the doctor's office.

Hospitals are unique in that they permit daily interchange of information through conferences, meetings, and consultations. Hospitals are the place

where early development of continuous self-assessment through the problem-oriented record has been taking place and where the various specialties in medicine, nursing, and allied health fields work together. Hospitals permit the accompaniment of educational peer review and other worthwhile forms of quality of care appraisal. They are the workshops where educational needs of the medical staff can probably be best assessed. Hospitals also are an example of the few places where behavioral change in medical practice habits can be viewed and measured under actual "front-line" conditions. In addition, hospitals also are probably closer philosophically to the office practices of most physicians than other types of teaching centers.

Keeping a close watch on the quality of continuing medical education at community hospitals can possibly best be accomplished by accreditation. As a state society you have the opportunity to do this yourselves. Any accreditation which your own society carries out would under this system I have just described be ratified by the AMA Council On Education and its Advisory Committee. The physicians attending continuing medical education programs could have greater satisfaction that they are securing good self-renewal without the need to travel far afield, since the continuing medical education at hospitals would be related to their own patients and their own patients' problems, and there would be greater likelihood that the quality of care rendered to their patients would be improved. The Joint Commission requirements could be more readily satisfied under such a system, and the hospital administrators and board of trustees also could rest more easily under such a system.

I should like to give you a very quick review of the current state of affairs in state medical society state medical associations was sent out from the AMA on July 16, 1971, encouraging state medical associations to consider whether they would like to be involved in this accrediting of continuing medical education system. We did not know the degree of interest which would be shown. In fact, at AMA staff level we felt that only a few of the more affluent state societies might be interested in setting up their own accrediting programs. Following two additional letters which served simply as reminders, and bearing in mind that state societies have many other things to do these days, we were pleasantly surprised to find that 31 state medical associations and one territorial medical association had a strong interest in developing and implement-

(Concluded on page 387)

Continuing Medical Education Through Self-Evaluation, Community Hospitals And Bi-Cycle System

Physicians Have Opportunity To Seize Initiative In Developing Quality Control Measures

By Henry S. M. Uhl, M.D.

Arthur Miller, one of the great playwrights of the Twentieth Century, made the following comment in a discussion about his work and especially his play, *THE PRICE*: "I have always been in love with wonder, the wonder of how things and people got to be what they are — what I was after was the wonder in the fact that consequences of actions are as real as the actions themselves, and yet we rarely take them into consideration as we perform actions, and we cannot hope to do so fully when we must always act with only partial knowledge of consequences." Miller is of course commenting on the common experiences of all human beings. But the closing lines of his quotation are especially pertinent to the professional work of the practicing physician. Over and over again, in the care of his patients the physician must take action with only incomplete knowledge of his patient's illness and without knowing what the full consequences of his actions may be.

During the past 15 years a number of thoughtful

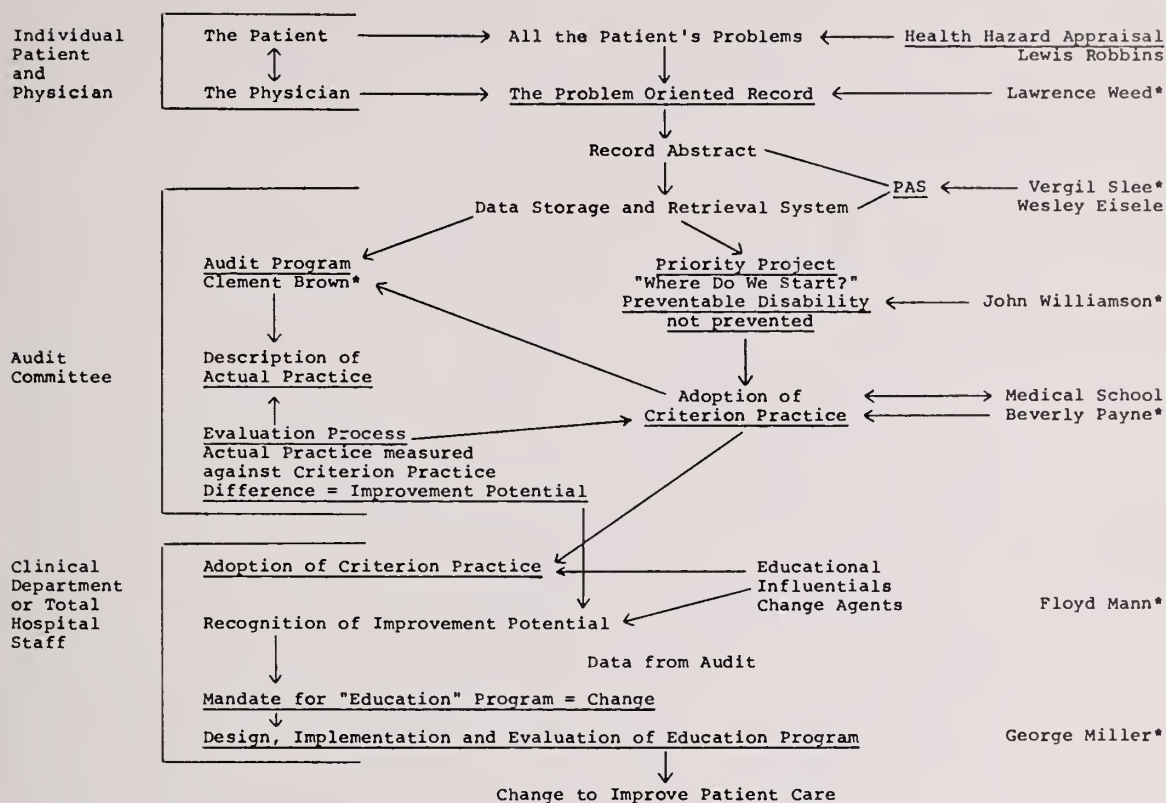
HENRY S. M. UHL, M.D., of Providence, Rhode Island, former Director of Professional Affairs, St. Joseph's Hospital, Providence, Rhode Island; former Chairman, Continuing Medical Education Committee, The Rhode Island Medical Society, Providence, Rhode Island.

Read at Meeting on the Continuing Medical Education Program of the Rhode Island Medical Society, October 14, 1972.

medical educators have attempted to develop a reorientation of our understanding of what effective continuing education for the physician ought to be. Figure 1 presents a comprehensive schematic diagram of methodologies that have been derived from the creative and original work of these several individuals. Before considering the key elements of this total plan, certain assumptions should be stated in relation to continuing medical education and these new methodologies. Firstly, the goal of continuing medical education is to improve the quality of the care of patients by physicians and other health professionals. Secondly, in order to accomplish this goal one must know first of all what is deficient in the professional behavior of the physician that would interfere with his provision of the highest quality of patient care. Thirdly, one must identify these deficiencies and then design an educational program to correct them. Fourthly, continuing medical education should provide constant updating and review for all physicians and other health professionals based upon contemporary knowledge of learning mechanisms which are fundamental for the effective use of information.

A first principle in learning is that of repetition and recall. Doctor Lewis alluded to this in his introductory paper for this conference when he noted that, just as there is atrophy of physiologic functions that are not used in the human body, there can be atrophy of intellectual and performing functions which are not called upon often enough for

IMPROVING PATIENT CARE THROUGH SELF EVALUATION = CME



*Names listed are those who represent prime resources - "People with the Methods"

FIGURE 1

the physician to go through the necessary process of repetition and recall.[†]

My intention in this brief presentation is to highlight key elements of the complete concept and to state that it is now possible for any community hospital to develop this process within its own medical staff, requiring only the support of its medical records department, its medical library and the effective use of educational techniques and audiovisual materials.

The process begins with the individual patient and his physician where the initial interaction takes place. It should begin with the use of the problem oriented record keeping system, and the patient's problems should be evaluated according to the Health Hazard Appraisal methodology of Robbins and Hall. This latter methodology will provide an age-oriented data base and disability index projection of the most likely health hazard for sex,

race, and age. Once this initial collection of information has been completed, the record should be abstracted. In Rhode Island, this can be done in all voluntary hospitals through the use of the PAS-MAP program,** which provides sufficient information on all patients for immediate retrieval.

The second step in the process is to develop an audit or peer review committee to identify for the individual hospital the priorities of needs in the care of patients. There are several different innovative program designs that have been developed for use by the professional medical staff committee (these include the concept of preventable disability not prevented, the adoption of criterion practice, and the bi-cycle system); once the level of medical practice in the hospital in regard to individual patient problems has been identified and described in terms of actual practice, it can be subjected to

(Continued on next page)

[†]The reader is referred to the References for original papers by the individuals whose names are marked with an * in Figure 1.

**The Professional Activities Survey — Medical Audit Program of the Commission on Professional and Hospital Activities of Ann Arbor, Michigan.

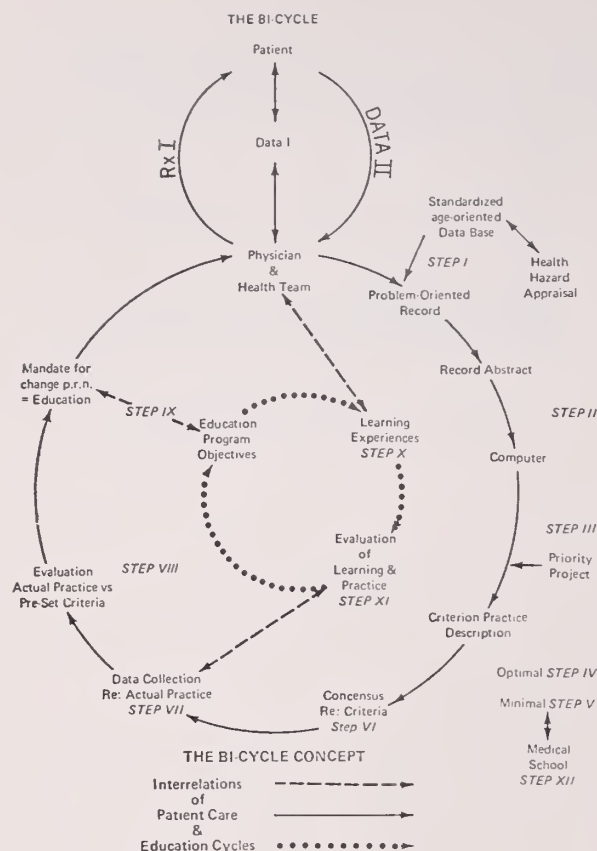


FIGURE 2

evaluation in which actual practice is measured against criterion or ideal practice, providing the identification of the deficiencies that exist. In the diagram this step is summarized by the statement "difference equals improvement potential."

In the third phase of this process, the committee and the medical staff of the hospital as a whole adopt a criterion practice standard and relate this to the recognition of the improvement potential which has been developed. At this point the Director of Medical Education, who is knowledgeable about the methodology of education that can bring about change in an effective manner, takes the data from the audit and organizes the educational program designed to achieve the desired change in professional behavior. Presumably, the implementation of these changes will lead to improved patient care measured by objective observations and re-evaluated at periodic intervals.

(The "Bi-Cycle System" is a simplified technique to accomplish the goal of effective continuing medical education and can be studied in more detail in the articles by Brown and Uhl (Mandatory Continuing Education — Sense or Nonsense? JAMA, 7 Sep. 70 213:1660-8) and Brown and Fleisher.)

In conclusion, it is proposed that, in addition to the conventional approaches to continuing medical education, each hospital in Rhode Island should give serious consideration to the development of the Bi-Cycle System as a standard part of its educational program, or some modification of that system through an internal peer review or patient care appraisal program. There are other modifications of this process that have been developed in the state of Washington, in Wisconsin by Yadeau, in Bridgeport, Connecticut by Gerrell, and others. In fact, the essence of the Quality Assurance Program, developed by the American Hospital Association in cooperation with the Association for Hospital Medical Education and now in co-sponsorship with the Joint Commission on Accreditation of Hospitals, is derived from the concepts presented in this paper (Figures 1 and 2) summarized in the discussion. Once again physicians have the opportunity to seize the initiative to develop effective quality control measures based upon their professional experience and their own judgement of what is reasonable and feasible in relation to practice in their own institutions.

REFERENCES

- ¹Weed LL: Medical records that guide and teach. *N Engl J Med* 278:593-600, 14 Mar 68; 652 7, 21 Mar 68.
- ²Hurst JW, Walker HK: *The Problem-Oriented System*. New York, MEDCOM 1972.
- ³Perlam JM, Slee VN: Quality care assessment and medical education. Defining education needs: PAS and MAP. *N Engl J Med* 284: Suppl: 74-81, 20 May 71.
- ⁴Williamson JW et al.: Priorities in patient care research and continuing medical education. *JAMA* 204:303-8, 22 Apr 68.
- ⁵Payne BC ed.: *Hospital Utilization Review Manual*. Ann Arbor, The University of Michigan, Feb 68. pp. 1-112.
- ⁶Mann FC: Achieving an effective staff. In: Eisele CW, editor: *The Medical Staff in the Modern Hospital*. New York, McGraw-Hill (Blakiston), 1967. Pp. 85-100.
- ⁷Miller GE: Continuing education for what? *J Med Educ* 42:320-6, Apr 67.
- ⁸Brown CR Jr, Fleischer DS: The bi-cycle concept—relating continuing education directly to patient care. *N Engl J Med* 284: Suppl: 88-97, 20 May 71.



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Continuing Medical Education In Community Hospitals A New Role For The Librarian

Success Of Program Furthered By Librarian Assuming Responsibility For Arrangement Details And Provision Of Educational Materials

By Natalie V. Lawton

I have been asked to tell you about a new role the medical librarian can play in a hospital educational program. However, everything I have done so far for the Westerly Hospital cannot be applied to all medical librarians. Some of the larger hospitals have their own procedures for their educational programs. So I shall tell you what I have done in my own hospital, which I feel has been helpful in relieving the doctors of time-consuming details.

The Postgraduate Medical Institute (PMI) in Boston started training programs to teach medical librarians how they can take a vital part in participating in educational programs in their hospitals. I am happy to say I took part in their first course last May and found it very informative. When I returned, I was asked to come before our medical staff and tell them what I had learned at PMI and how we could go about getting a program underway.

The first thing we had to do was find out what

NATALIE V. LAWTON, of Westerly, Rhode Island, Medical Librarian, Westerly Hospital, Westerly, Rhode Island.

Read at Meeting on the Continuing Medical Education Program of the Rhode Island Medical Society, October 14, 1972.

the needs were and then try to fill them. To do this I circulated questionnaires which covered such items as: Are you interested in an educational program in your hospital. What type of a program do you want (such as guest lecturers, panel discussions, lectures by your own staff members, audio-visual, luncheon lectures. I also asked what topics would be of interest to them or any other suggestions or remarks. I received a 95 per cent response to these questionnaires, which showed that there was great interest and support for an educational program.

Next I condensed the answers on to a work sheet to obtain a clear picture of what the majority wanted, how they wanted it, and when. The final analysis was presented to those who were planning the program, and we went on from there.

First, a series of luncheon lectures was planned, and members of our own staff who had indicated that they would be willing to give a brief talk were asked to take part in these. We have two luncheon lectures a month and try to keep two months ahead on the programming. We have signed up for a guest lecture series with the Postgraduate Medical Institute for one evening a month. I will add

(Continued on next page)

here that the doctors at South County Hospital have been invited to participate in these evening lectures with us. The Program Director at PMI was consulted, so that the topics for the lectures would be of general interest to all staff members. A program was formulated and sent to me, and we now have speakers coming once a month from Boston through May 1973.

Once all of these lectures were arranged, I typed out the schedules, made sure each doctor received one, posted one on the bulletin board, and wrote a notice on the blackboard in the library. Thus everyone was notified. Next, I gave a schedule to the head of the housekeeping department, so that the conference room could be prepared and the necessary equipment could be set up — such as a projector or blackboard. I make it a point to ask the speakers in advance if any equipment is needed so that everything will be ready for them. I also have to give notice of these meetings to the kitchen manager, so that he can prepare for the luncheons and also for coffee and refreshments for the evening lectures. Then I put reminders in the doctors' mail boxes a few days before the upcoming meeting and send a special reminder to the speaker. These are all minor details, but they have to be taken care of for the success of the program.

Since I have a list of all of the upcoming lectures, both luncheon and evening, I check the library for books and journal articles on the topic that will be presented at each lecture, so that I can retrieve the material quickly if our own staff member wants added information for his own talk, or if anyone wants material on the subject to be discussed by the guest lecturer. Since the medical library is the main source of all educational material, I am pre-

pared to help anyone who comes to me looking for information. If the material is not in our library, I manage to get it from the larger libraries in Providence, where the librarians have always been most helpful to me and give excellent service.

As an added service to our out-of-town speakers, I keep a supply of street maps of Westerly in my desk so that directions can be sent to anyone who does not know his way to the Westerly Hospital. These were easily obtained from our Chamber of Commerce office.

I would also like to mention the use of audio-visual equipment. The hospital owns a slide projector, a movie projector, an overhead viewer, and a tape cassette. Most of the films that are shown are borrowed from drug companies. We have some of our own slides, and medical and surgical tapes have been donated to the library by our own physicians. However, the Charles A. Dana Medical Library at the University of Vermont has an extensive audio-visual department with interlibrary loans for slides, tapes, films, and film strips. We have their catalog and have borrowed several times from them recently for lectures given to the nurses. I feel we are fortunate to be able to use this service, as it would be impossible for a library of our size to stock all of the "software" that is called for.

I think I have given you an overall view of what is taking place at the Westerly Hospital in our continuing educational program. With the time-consuming details taken care of by the librarian, the educational material made available in the library, you should get cooperation and enthusiasm from the medical staff for a successful program.



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Continuing Education: One Specialty's Approach

A Systematic Course of Self-Improvement For The Practicing Ophthalmologist Has Been Developed

By Robert S. L. Kinder, M.D.

Continuing education in Ophthalmology presently covers a continuous spectrum from the medical student through the span of ophthalmic practice as well as the education of ophthalmic paramedical personnel. The program for the practicing ophthalmologist is the subject of this brief report.

In 1970, a master plan for continuing education was formulated under the sponsorship of the American Academy of Ophthalmology and Otolaryngology. During this first year an Ophthalmic Knowledge Assessment Program (OKAP)¹ examination was offered, enabling the practitioner to determine some of his strengths and weaknesses and to rate himself with his peers. This examination was similar to that given in residency training centers to allow directors to compare the performance of their trainees with others throughout the

country. As a result of the OKAP information, it was hoped that the practitioner would be stimulated and guided in a program of self-study and other efforts to enhance professional performance. Thus far, nearly 25 per cent of all active ophthalmologists have participated in the OKAP.

However, while the OKAP may tell one where his weaknesses lie, it fails to direct him in an *organized* program of self-study. Just where should he turn? Should he attend more meetings, read more journals, review basic texts, or what? With this problem in mind the Academy inaugurated the Ophthalmology Self-Education Program (OSEP).

A group of essentially full-time practicing ophthalmologists designed a program to assist their peers in reviewing systematically and mastering the basic information, current concepts, and recent scientific advances that were considered important for clinical practice. Realizing that ophthalmic knowledge is expanding rapidly, and that new developments constantly alter clinical practice, the OSEP committee planned its program in such a way that the clinician will be able to maintain a continuing process of education throughout his professional life. The OSEP is, of course, in addition to meetings,

(Continued on next page)

ROBERT S. L. KINDER, M.D., of Providence, Rhode Island, Assistant Surgeon, Rhode Island Hospital; Assistant Professor of Ophthalmology (Clinical), Division of Biological and Medical Sciences, Brown University, Providence, Rhode Island. Member, American Academy of Ophthalmology and Otolaryngology; Committee on Continuing Education.

TABLE 1

Section	Subject Areas
1	Optics and refraction
2	Embryology, Anatomy, Genetics, and Developmental Abnormalities
3	Biochemistry, Ocular Physiology, Metabolic Disease, and Glaucoma
4	Pathology and Systemic Disease
5	Neuroanatomy and Neuro-Ophthalmology
6	Extraocular Physiology and Motility
7	Microbiology, Immunology, and External Ocular Disease
8	Pharmacology, Therapeutics, and Ophthalmic Surgery

TABLE 2

Each Section contains:

1. Instructional material which outlines the material considered essential for contemporary ophthalmic practice.

2. Supplementary instructional material designed for the ophthalmologists with special interests and needs related to the subject area.

3. References, explicit and exact, taken from readily available standard sources and coordinated with the instructional material.

4. Educational aids, such as syllabi, booklets, color photoslides or reproduced documents, closely associated with the curriculum.

5. Discussion topics directed to significant aspects of the subjects under study and appropriate for discussion with colleagues.

6. A self-scoring, self-assessment examination in which each question is accompanied by a reference.

7. A critique which each participant is encouraged to return to the Academy, so the program can be adjusted and improved on the basis of participant reaction.

journal reading, and other self-improvements familiar to all physicians.

DESCRIPTION

The OSEP began with a self-graded, self-assessment examination of 120 multiple-choice questions relating to various aspects of ophthalmology. Based on this examination (which is similar to, but more clinically oriented than, the OKAP mentioned above), personal interests, existing knowledge, and need to know, the ophthalmologist then reviews an outline of the entire spectrum of ophthalmic knowledge, and selects one or two major areas each year for self-study.

The OSEP core curriculum consists of eight sections (table 1) with each section presenting related aspects of basic and clinical science as a closely integrated unit that associates fundamental scientific knowledge with structures, disease processes, and patients.

To guide and assist in the self-education process, each section contains the material outlined in table 2.

The OSEP was begun in the summer of 1972 and to date nearly 4,000 practicing ophthalmologists have made inquiry or begun actual study. The program is free to Academy members, but there is a modest \$50 per year fee for non-members. Present plans call for up-dating and revision of each section annually. Newer teaching techniques such as Video-Extension programs are currently under evaluation and study for possible use in the future.

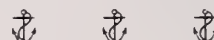
SUMMARY

Under the sponsorship of the American Academy of Ophthalmology and Otolaryngology, a systematic course of self study and improvement for the practicing ophthalmologist has been developed by a committee of his peers. An outline of the curriculum, and the material contained in the various courses is presented.

REFERENCE

¹A prospectus: The Ophthalmic Knowledge Self-Assessment Program. *Trans Amer Acad Ophthalmol Otolaryng* 74: 151-5, Jan-Feb 70

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Editorial

MEDICAL EDUCATION

That medical education has been in a process of fermentation and change during the past ten years is news to no one in the profession.^{1,2} But despite the intensive activity, the national and regional conferences, special study projects, and the creation of some twenty-five new medical schools, the basic issues remain unresolved. Discussions of medical education continue to be characterized more often than not by firmly held personal opinion, empirical evidence, and very little in the way of objective and valid factual data. At the most recent Congress on Medical Education in Chicago (February 9-11, 1973), there was a section devoted to the topic "Changes in Medical Education — Problems and Promises." The discussion revolved essentially around the proposed restructuring of pre-clinical education. The panel included three experienced medical school deans, a chairman of a department of physiology, a medical student, and a knowledgeable director of medical education from a community hospital in Oregon. The presentations and the discussions were always interesting, were often humorous, but failed to come to any valid conclusions. It was all too reminiscent of innumerable similar panels and reminded one of a circular motion in which the participants returned to the original starting point without any evidence of progress or change!

Someone once called the activities of university curriculum committees as representing one of the "annual rites of spring!" Perhaps one of the most useful functions of such committees is to give all members of the faculty an opportunity to ventilate their own frustrations; but certainly they are seldom characterized by objective study, the state of "warfare" between the basic biomedical scientists and the clinical medical scientists continues unabated, and each side seems determined to give as little as possible in the way of allocated time and facilities from the increasingly scarce resources of the medical school.³

Through these past twenty-five years since the end of World War II, many structural changes have taken place in medical education, but there has been no change in the central theme first enunciated by Welch and Osler at Johns Hopkins University before the turn of the century: that

medical education should be a life-long process and should be a continuum. Yet, almost 100 years later there is no continuum, and we still have the fragmented process of undergraduate pre-medical education, medical school education, so-called graduate medical education for interns and residents, and the long period of the practice of medicine and voluntary continuing medical education.²

Nevertheless, the quality of the practice of medicine in the United States on the whole is the equal of that in any other modern industrial and technological society. It may well be that it makes no difference what kind of curriculum is organized and what courses are presented, as long as medical schools in the United States continue to attract the high quality of students who enter the profession. Ever since the 1920s, medical schools have drawn upon those college students in the 98th percentile academically, and this past year there have been 37,500 applications for approximately 13,000 positions. The admissions committees of the medical schools are in the enviable position of having to select the best from the better! These college students are among the most highly qualified intellectually and among the most highly motivated individuals in our society. Twenty years of personal experience at the interface of university medicine and community medicine has begun to suggest to me the empirical conclusion that it is the quality of the individual student that is the common denominator of excellence in American medicine.

One trend certainly is emerging, and is especially prominent in the program in medical science at Brown University. That is the "downward" movement of the biomedical sciences into the early years of undergraduate college education, and even into the final two years of secondary schools of education. This allows for the earlier introduction of clinical medicine and its intimately related sciences, and should provide for an effective correlation of these sciences through the use of faculty based in teaching hospitals. This trend has greatly accelerated in the past fifteen years, so that there is now great pressure at the national level to "shorten" the total time span of medical education and to accomplish this by a compression of curriculum hours

(Continued on next page)

devoted to the basic biomedical sciences and to integrate clinical medicine more effectively with so-called graduate medical education at the residency level.^{4,5}

If one accepts the assumption that the high quality of student entering medicine will continue to assure a high quality of product, the crucial issue then becomes the need for effective continuing medical education because of the rapid pace of change in the biomedical sciences and their application to the diagnosis and treatment of human beings. The need is to make operational the methodologies now proven and available so that continuing medical education will be a reality in the community hospital and in the office practice of medicine. The essentials of the system are the collection of data, which can be achieved through the use of the problem oriented medical record, and the development of uniform record reporting systems in hospitals. With this information available the application of the concepts of the BiCycle System

and the age-oriented data base in the management of patients can provide each physician with his own internal evaluation of his practice on a continuing basis. This process can become a part of the daily activities of physicians, if it is introduced to each physician when he is still a student in medical school and in his graduate education in the affiliated teaching hospital.

HENRY S. M. UHL, M.D.

REFERENCES

- ¹Magraw RM: *Ferment in Medicine*. Philadelphia, W. B. Saunders Company, 1966
- ²Stevens R: *American Medicine and the Public Interest*. New Haven, Yale University Press, 1971 (especially Parts IV and V, Pp. 291-541)
- ³Smythe CM: National board examinations and curriculum change. Editorial. *J Med Ed* 43:1006-8, Sep 68
- ⁴Uhl HSM: More physicians in less time at lower cost. *Hosp Practice* June 1970. Pp. 99-105
- ⁵Uhl HSM: Which direction for medical education? Editorial. *Hosp Practice* March 1972



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HOUSE OF DELEGATES REPORT

(Continued from page 356)

Action: A motion was made, seconded and voted that the report of the Trustees of the Medical Library, as submitted, be approved and placed on file.

FEDERAL REQUIREMENTS FOR STATE REHABILITATIVE SERVICES

Dr. P. Joseph Pesare, Medical Director of the State Rehabilitative Services, reported that the federal government has established certain regulations to be complied with for the payment of services rendered to recipients of the aid programs. He stated that payment checks must list on the back that the payee complies with the Civil Rights Law, accepts the provider agreement calling for maintenance records that may be reviewed, and attests that the claim is not a fraudulent one.

He stated he is obligated to enforce the ruling, and his report was for the information of the House and the membership.

Action: A motion was made, seconded and voted that the report submitted by Doctor Pesare be accepted.

SOCIAL WELFARE COMMITTEE

Doctor Mathieu gave a brief oral report on the federal program to ascertain the physical status

of persons under the age of 21, and he urged physicians to cooperate in filling out the necessary reports for the services performed under this program.

MEDIATION COMMITTEE

Dr. Nathan Chaset reported on the increasing number of complaints to the Society since the publicity of the Supreme Court decision on the Wilkinson case. He also reported on the meeting planned for April 4 for all physicians of the State on the matter of malpractice.

Action: A motion was made, seconded and voted that the report of the Mediation Committee Chairman be received.

OTHER COMMITTEE REPORTS

The reports of the Committees on Highway Safety, Library, and Medical Aspects of Sports, as submitted in the handbook for the meeting, were received and placed on record.

The report of the Liaison Committee with the Tri-State Regional Medical Program was received, and a motion was made, seconded and voted that the Committee be discharged, as it requested.

CANCER PROGRAM

Dr. Martin Felder reported that funds are available for certain cancer projects, such as training

(Continued on next page)



Wherever you go,
forget your telephone
calls. We'll take them
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MEDICAL BUREAU
of the
Providence Medical Association

M.D.

(Mighty Deserving)

of life's better things. No physician ever has a routine day,—or night. There are critical decisions to make—involving life itself.

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Town Liquor Company
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Rumford, Rhode Island 02916

Name _____

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434-4563

programs, detection, and education, and he suggested that any physician interested in developing such programs to contact the State Department of Health.

ADJOURNMENT

The House adjourned at 3:40 p.m.

Respectfully submitted,

STEPHEN J. HOYE, M.D.

Secretary

* * *

REPORT OF THE SECRETARY

Stephen J. Hoyer, M.D.

The following actions taken by the Council since the January meeting of the House are reported:

1. Commendation was given the President for addressing a letter to Rhode Island students at medical schools to inform them of the desire of the Society to aid them in their future plans for the practice of medicine, hopefully in Rhode Island.

2. Approval was given of the appointment by the President of Drs. John C. Lathrop, Seebert J. Goldowsky, and Leland Jones to the R. I. Inter-agency Council on Smoking.

3. The importance of the American Medical Association to all members of the Society was pointed out in a special notice signed by the President enclosed with the AMA dues bill, and the Council urged support of the AMA by every Physician.

4. The Council was informed of a communication from Governor Noel assuring the Society that he would work closely with it in preparation of any "dread disease" (Catastrophic) program. He also expressed interest in the Proposal of the President of the Society for continuity of coverage in insurance programs for worker unemployed for a short period of time.

5. Approval was given for the printing of the revised bylaws of the Society, and for distribution of them to the membership.

6. The Librarian was authorized to employ a part time student helper for the entire year instead of a fulltime helper for the summer months only.

7. A report on the emergency room treatment of sexually assaulted females was referred to the Committee on Maternal Health which will propose guidelines to general hospitals for medical examinations to be given such persons.

8. The present procedure of individual members listing their specialty for the official Roster was approved, with the provision that any flagrant abuse of specialty listing by any member be referred to the Council for action.

9. Letters of appreciation were reported from Mrs. Charles P. Williamson for the Society's donation to the Outward Bound School in Maine in Mr. Williamson's memory, and for the tribute to him by the House of Delegates.

10. The Council was informed that the R. I. Society of Osteopathic Physicians and Surgeons has named Dr. J. Brendan Wynne as its representative as one of the five incorporators of the proposed R. I. PSRO, Inc.

11. Drs. John Cunningham, Stanley D. Davies, Edmund T. Hackman, and Thomas Head, secretary of RIMPAC, were named as the Society's official delegates to the AMPAC Meeting in Washington on March 10-11.

12. The Council voted that the R. I. Medical Political Action Committee's (RIMPAC) annual voluntary contribution be listed on the Society's annual dues bill in 1974, provided legal counsel finds that such listing does not jeopardize the tax exempt status of the Society.

13. Solicitation of patients by an organization called American Medical Partnership was investigated by the executive secretary, and a local physician involved in the program was informed promptly of the violation of ethics involved, and he has desisted from any further activity in the program.

14. The President was authorized to notify the Chairman of the House Judiciary Committee of the R. I. General Assembly, and Governor Philip Noel, of the most recent (1970) action of the Society on the issue of abortion.

15. A report of the Trustees of the Medical Library was received and placed on record.

16. The Council was informed of actions taken by the state director of health concerning chiropractic advertising which had been called to his attention by the House at the January meeting.

17. The Council was informed that the Board of Medical Examiners and the State Department of Health concur with the House of Delegates resolution on acupuncture adopted at the January meeting.

18. Legal counsel informed the Society that suggested guidelines set down by the R. I. Supreme Court in the Wilkinson case are being prepared for mailing to the membership, together with possible consent forms after presentation at a meeting to be held on April 4th at the Colonial Hilton Inn under the joint auspices of the Society and the Providence Medical Association to which all physicians are invited.

19. Incorporation of the Rhode Island PSRO is planned for early in March.

20. Legal counsel has submitted draft of legislation relating to Privileged Communications between Physicians and Patients which the Council has approved for submission to the General Assembly.

21. Legal counsel was requested to investigate the legal implications that would result from the altering of the Fisk Fund Essay program by the Society.

* * *

REPORT OF THE TREASURER

John P. Grady, M.D.

1. 1972 *Financial Report of the R. I. Medical Journal*

A report on the financial status of the Rhode Island Medical Journal is appended. As noted, the Journal had only \$658.43 in its cash reserve as of February 1, 1972, and at the end of its operations year a cash reserve of \$1,962.83 is reported which includes \$1,304.00 reserve over costs of publishing the Journal.

However, the Journal again is unable to pay the annual charge of \$5,000 to the Society for staff services utilized in preparing and distributing the Journal each month.

(Continued on next page)

DISTINCTIVE FRENCH PROVINCIAL CUSTOM BUILT ON 15 ACRE WATERFRONT ESTATE



FOR FURTHER DETAILS AND INSPECTION

W. HENRY COLEMAN, INC.

19 First Ave., East Greenwich

884-5522

The Publications Committee, chaired by Dr. John A. Dillon, is to be commended for their difficult task of continuing the Journal under a limited budget and in finishing the year's operation with a net reserve.

2. *Veterinary Medical Association Contribution*

The Rhode Island Veterinary Medical Association has increased its annual contribution to the library for books on veterinary medicine from \$100 to \$200, and the gift has been gratefully acknowledged.

3. *Memorial to Charles P. Williamson*

Friends of the late Charles P. Williamson, legal counsel of the Society for more than two decades, were asked to make contributions to Hurricane Island Outward Bound School in Rockland, Maine, as a memorial. The Officers of the Society authorized a \$100 contribution which has been acknowledged by the School, and by Mrs. Williamson.

4. *Gift from the A. H. Robins Company*

Mr. E. Claiborne Robins, chairman of the board and chief executive officer of the A. H. Robins Company of Richmond, Virginia, has sent the Society a check in the amount of \$200 for "use in furthering such professional or educational programs as you feel will be of the greatest benefit."

The gift has been acknowledged with appreciation and thanks.

5. *Retirement of Executive Secretary*

The Council, taking cognizance of John E. Farrell's 35 years of service to the medical profession of this State as the Executive Secretary of the Society, a position from which he is retiring on July 1, reviewed his retirement program and approved of supplemental benefits.

6. *Authority of Library Committee to Seek Grant*

The Council has approved of a request of the Library Committee to seek a financial grant, possibly from a foundation, to assist in the cost of preserving the valuable books housed in the three floors of book stacks at the Medical Library.

FINANCIAL STATEMENT — 1972

Cash operating balance,

February 1, 1972 \$ 658.43

Receipts, 1972:

Advertising and circulation: \$17,126.37

R. I. Medical Society..... 3,000.00

\$20,126.37

\$20,784.80

(*Includes -599.73 refund from State Medical Journal Advertising Bureau of money withheld for national operations in 1971.)

Disbursements:

Copyrights \$ 72.00

Cover designs 590.01

Postage 450.00

Printing Jls. 15,014.00

Printing 1972 Index 185.00

Editor-in-Chief 2,000.00

Miscellaneous

(Supplies, etc.) 510.96

Total \$ 18,821.97

\$18,821.97

Cash balance, February 1, 1973 \$ 1,962.83

* * *

1972 receipts: \$20,126.37

1972 expenses: \$18,821.97

Net reserve \$ 1,304.40

Note: The Rhode Island Medical Journal owes the Rhode Island Medical Society for staff services and use of facilities as follows:

1969 \$ 5,000.00

1970 \$ 5,000.00

INTER NOS . . .

Just between us,

Local group plans have demonstrated a record of strength and stability that is rarely matched by programs more geographically spread.

This is merely to suggest that the first line of defense in economic security planning should include your R.I.M.S. official sponsored disability income plans.

Complete insurance planning begins here.

R. A. Derosier Agency

Group Administrator for R. I. Physicians Since 1949
"Treating The Whole Patient" Thru These Affiliates

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FOURDEE PLANNING CORP.

(NASD Broker-Dealer)

215 Waterman Ave., E. Prov. 02914 438-0660

1971	\$ 5,000.00
1972	\$ 5,000.00
	<hr/>
	\$20,000.00
	<hr/>

JOHN E. FARRELL, ScD.
Managing Editor

* * *

RECOMMENDATIONS FROM THE COUNCIL

Stephen J. Hoye, M.D.

1. *Authorization for an Executive Secretary*

The Society bylaws provide that the Council may employ an executive secretary of the Society after authorization by the House of Delegates. Mr. Farrell, executive secretary of the Providence Medical Association since 1938, and of the Society since 1943, will retire as of July 1, 1973. Therefore the Council asks for authority to employ a successor.

2. *Public Notices by Physicians*

In September, 1967, the House approved regulations relating to Public Notices by Physicians. These regulations have been reviewed by the Council, and they are submitted for the consideration of the House. (See Appendix B)

3. *Blue Cross Board Members*

The Society annually nominates two physicians to serve as the Society's delegates on the Blue Cross Board of directors. The Council submits as nominees as these delegates Drs. Earl J. Mara and Arnold Porter.

4. *Listing of Specialty Groups*

If the bylaw revisions are adopted at the annual meeting in March 14th each specialty group in the State recognized by the House of Delegates shall be eligible to have a non-voting representative in attendance as a spokesman for the specialty. In order that the makeup of the House may be complete for the September meeting, the Council submits at this time a list of the current organized specialty organizations, and it asks that the House take action on this matter. (See Appendix C)

5. *New AMA Medicredit Bill*

The American Medical Association has introduced a revised MEDICREDIT bill in the Congress. The Council recommends approval and support of this legislation, and it asks the House to concur in such approval and support. (See Appendix D)

6. *Medical Society Approval for Cancer Prant*

A demonstration project for the earlier detection of breast cancer which would be funded by the American Cancer Society and the National Cancer Institute is submitted. (See Appendix E)

The Council approved the proposal, and it submits the explanation of the program to the House for its information.

7. *Slate of Officers and Standing Committees*

The Council, in accordance with the bylaws of the Society, submits with recommendation of adoption, a slate of nominees of Officers and Standing Committees to serve the Society from the annual meeting in 1973 until the annual meeting in 1974.

* * *

REPORT OF THE TRUSTEES OF THE MEDICAL LIBRARY

Early in the year the Trustees were faced with the problem of replacing the worn out heating system which broke down completely in March following weeks of expensive service calls, soot a cumulation throughout the building, and frequent shutdowns.

The consensus of opinion of several furnace engineers and oil distributors was that we should convert to household (No. 2) oil, block off the sludge-filled underground tank and replace with indoor tanks, repair and re-wire the existing boiler, and install a new motor. Several bids were received and that of the Pennsylvania Petroleum Products Company (now transferred to Kallaher Oil Com-

(Continued on next page)

WOMAN MEDICAL STUDENT SCHOLARSHIP AVAILABLE

"The New England Region of the Soroptimist Clubs, a service club for business and professional women, again announces the availability of a medical scholarship award in the amount of \$2,000.00.

"This award is to be presented to a woman medical student, in need, from the New England area preferably and attending a medical school in New England, and who, additionally, expects to practice in New England.

"The award will be presented in 1974 at the Regional Spring Conference of Soroptimist Clubs meeting at the Fix Run Inn in Ludlow, Vermont. The deadline is fast approaching and women interested in applying for this award are urged to contact the Regional Medical Scholarship Chairman in Stamford, Connecticut within the next three months.

LAURA GREY MORGAN, M.D.,
Chairman
Regional Medical Scholarship
21 Bridge Street
Stamford, Connecticut 06905

pany) was accepted. Household is more expensive than the industrial oil used previously but we now have a service contract covering any but extra-ordinary service calls, and stating that we are entitled to a 2¢ discount on the prevailing cost per gallon. The furnace has given no trouble this season and the amount of dust is minimal.

The boiler room was cleaned by Air Wash Service Company during the summer. The Providence Fire Department came to inspect the work of furnace and tank installation and requested us to remove our automatic, Chemical fire extinguishers and all flammable materials stored in the boiler room. We complied and purchased metal, covered drums for trash collection.

Unusually heavy rain with high wind caused flooding when the one drain on the roof backed up. Water poured in around the ventilators and down the wall between the main building and the stack area. There was less damage than anticipated — the auditorium ceiling shows slight staining and the carpeting has water stains. There was on damage in the stacks other than the wall. Eastern Construction Company found the roof itself to be in good shape but recommended run-off spouts to prevent future trouble. Also, they cleaned the small roof and have been making a study of needed structural repairs such as pointing blocks, replacing mortar, and fixing the stone work at the entrance. The work would be done gradually as finances permitted.

Other work done during the year included shampooing the carpeting and washing the windows.

Respectfully submitted:

JOHN A. DILLON, M.D.

Chairman

* * *

COMMITTEE ON HIGHWAY SAFETY

The Committee on Highway Safety still expresses great concern regarding the apathy of the public generally, and the legislators in particular, relative to tighter regulations against the motorist accused of driving an automobile while under the influence of alcohol or drugs. We have sought to amend the law for the past three years but we have been unsuccessful.

At this time the Committee urges that the House express its support of legislation to enforce the use of seat belts by passengers in all moving motor vehicles.

It is noted that seat belts that have to be fastened over the body of the rider will be mandatory in all 1974 automobiles.

However, we hope to see the reintroduction of legislation in the Rhode Island General Assembly of the bill offered a year ago which makes the use of seat belts mandatory, stating that "Any person who is operating or is a passenger in a moving motor vehicle equipped with safety belts shall securely fasten such belt around his or her person during all times the motor vehicle is in operation. Any person who shall violate the provisions of this section shall, upon conviction, be fined twenty dollars (\$20.00) for the first offense, Upon conviction of a second offense, and for each subsequent offense, the fine shall be two hundred dollars (\$200.00)."

The Committee also supports the bill now before the Assembly (H 5249) that requires all police department accident reports filed with the state Registry of Motor Vehicles by motorists involved in a motor vehicle accident to state whether persons involved in the accident were wearing seat belts and whether the driver or any passengers were thrown from the motor vehicle as a result of the accident.

As physicians we are well aware that many serious disabilities, and even deaths, in motor vehicle accidents could be avoided by the use of seat belts and/or shoulder straps. The education of the public to use these safety features that are now standard on new automobiles is slow and tedious; therefore, drastic measures are warranted to direct attention to the necessity of using the equipment.

The Committee has also considered the feasibility of licensure for bicycle riders, and it will also study the possibility of requiring specific safety equipment, such as adequate lights on all bicycles ridden after dark. The Committee has noted with interest the stepped enforcement of regulations on bicycle riding in the city of Newport. All residents who ride bicycles in that city must have a license from the police department; they must ride single file with the flow of traffic on heavily traveled streets; they may not ride more than two abreast on side streets; they are prohibited from using sidewalk public paths, parks, school grounds and playgrounds, except for activities sponsored by school authorities of the Department of Recreation. Cyclists must also indicate turns with hand signals, and the bicycles must have both a front light and a rear light for night riding.

Respectfully submitted:

THOMAS C. McOSKER, M.D.

Chairman

* * *

LIAISON COMMITTEE OF THE TRI-STATE REGIONAL MEDICAL PROGRAM

This Committee was established as a liaison between the Society and the Tri-State (New Hampshire, Massachusetts and Rhode Island) Regional Medical Program. On February 6, 1973 state advisory groups were notified that RMP legislative authority expires on June 30, 1973, and the regional medical programs are to be terminated. The conditions under which the program is to be concluded are set forth in the communication listed below this report which was directed to the Executive Director of the Tri-State Regional Medical Program.

In view of this action the Liaison Committee should be discharged as a committee of the Society.

STANLEY D. SIMON, M.D.,
Chairman

GEORGE V. COLEMAN, M.D.

MELVIN HOFFMAN, M.D.

JOHN STROM, M.D.

JOHANNES VIRKS, M.D.

* * *

Robert W. Murphy
Executive Director
Tri-State Regional Medical Program
Medical Care and Educational Foundation, Inc.
Boston, Massachusetts 02108

The President has submitted his budget proposals to the Congress. While the amount for fiscal year 1973 for RMPS grants and contracts is shown a \$125,100,000, the actual amount available to the program for grants and contracts during the present fiscal year is \$55,358,000. The actual reduction in the amount available is detailed on page 384 of the appendix to the official submission.

You are aware that we have been operating under a continuing resolution. Early in the fiscal year, 17 RMPS were funded for another year with start dates of September 1, 1972. This was followed by awards at the end of December to 18 RMPS with start dates of January 1, 1973. There remain 21 RMPS with May 1, 1973 start dates.

By telegram on December 29, 1972, I advised the 18 RMPS with January 1st start dates that because of the limited funds available, their awards were authorized only through June 30, 1973, funded at only half the amount established for one year. Similarly with the limited funds available we have determined that the 21 remaining awards with May 1st start dates can be extended only through June 30, 1973.

No grant funds are included in the President's budget request for RMP in fiscal year 1974. Therefore, with no additional funds proposed to be made available in fiscal year 1974, and with limited funds available this year, the above funding decisions were made to avoid the possibility of over-obligating fiscal year 1973 funds. Further, in order to treat all 56 RMPS as equitably as possible and attempt to provide funds for the most critical situations, all of fiscal year 1973 grant awards will terminate on June 30, 1973. It follows, then, that the 17 grants awarded as of September 1, 1972, will receive amended awards reducing the budget period by two months with appropriate prorated funds. As stated above, all RMP grants will be terminated on June 30, 1973.

It is our intention to permit grant extensions beyond June 30 but to no later than February 15, 1974. Additional funds will not be awarded except as determined necessary to adhere to the principle of equitable treatment. This would be to accommodate only those activities and program staff identified by the RMPS as requiring support beyond June 30, 1973 that cannot be terminated by that date due to need to finalize necessary reports, publish findings, etc. Upon receipt of your plans by March 15, 1973, for terminating grant support we will announce on April 15, decisions regarding redistribution of any grant funds available through adjustment of awards which can be able to support much of what is considered essential by you because of the limited funds available. Your plan, then, for beginning an immediate phaseout of RMPS support to be completed no later than February 15, 1974, should be developed and submitted to us no later than March 15, 1973. The plan should reflect the following requirements:

1. Do not enter into any new contracts or agreements for activities or personnel which commit RMPS funds.
2. Request continued support for only those activities requiring RMPS funds that will produce a predictable result justifying the federal investment, or
3. Request continued support for those essential activities where a mechanism has been established to continue without interruption support of the activity from other resources.

It is requested that your plan be submitted in writing, accompanied by pages 1, 6, 15 and 16 of the application form 34-1, for phasing out all RMPS support by June 30, 1973, and a separate

(Continued on next page)

plan and set of forms for activities proposed for continuation beyond June 30, 1973, but in no event beyond February 14, 1974.

May I remind you that your plan for phasing out operations must involve the grantee official and the RAG in accordance with their responsibilities delineated in RMPS-NID dated August 30, 1972. Staff in the Division of Operations and Development are available to consult with you in the preparation of your plan.

It is expected that all expenditure reports under this procedure will be received in RMPS by no later than June 15, 1974.

I am sure each of you recognize that in the light of the President's recommendations we need to proceed with the development of phaseout preparations in an orderly and prompt manner.

HAROLD MARGUILES, M.D., *Director*
Regional Medical Programs Service
Rockville, Maryland 20852

* * *

LIBRARY COMMITTEE

The Library Committee met on February 6, 1973.

Numerous book purchases suggested by Society members and by the Librarian were recommended.

The need for part time non-professional assistance to the librarian, to free her from menial tasks for urgently needed skilled work, is important. A request has been sent to the Council to help in this matter with a modest financial expenditure.

A book clearance sale of duplicates will be held in the Fall.

All three floors of our stacks are in deplorable state. A request has been sent to the Council to provide funds for cleaning purposes. The Council has also been asked to allow the Committee to seek grant aid for renovations to reduce the dust hazard, provide adequate lighting, and install air conditioning. Our Federal Grant for microfilming and binding, amounting to \$16,671 over five years, comes to an end on May 31.

The librarian would be glad to show any House of Delegates member the present condition of the stacks.

Respectfully submitted:
THOMAS PERRY, JR., M.D.
Chairman

* * *

LIBRARIAN'S REPORT

We wish to report that we have not had a dull moment during this 1972-1973 period... nor an idle one. *Our activities:* We answered the telephone with dictionaries and directories at hand. Jablonski and Magalini 14 running steps away, giving advice if possible, information on many subjects, and lending a sympathetic ear. (If a medical tidbit appears in the news media, we know we should be ready for calls.) We manned the copy machines, sending out 1,592 articles (10,348 pages) to individuals and to other institutions. We circulated 261 books and 815 journals and loaned St. Joseph's Hospital 14 instruments for a TV program during their anniversary celebration. We requested 117 items from other libraries for our patrons. We performed 175 literature searches. We worked with 1,966 readers who came to the Library. We processed 501 periodicals and serials received regularly through subscription, exchange, and gift. The 1,549 journals, 222 books, and 64 pamphlets received through gifts were evaluated, sorted, and routed. We added 457 texts and 85 pamphlets to our permanent collection. The MLA Exchange furnished us with 146 items, filling in lacks in our holdings. We gave to other libraries 2,100 duplicate journals, 4 books, and 7 pamphlets. And on the semi-circular side, we entertained the local group of medical librarians and their guests in November. In September, the new Sciences Library at Brown University was the scene of the 15th Annual Meeting of the New England Group of the Medical Library Association. Your Librarian was co-chairman for exhibits.

Our staff: We had a wonderful summer. In addition to the Librarian and our very competent Assistant, Miss Connie Simpson, we had a volunteer cataloguer and a summer employee. Mrs. Betty Bodemer, former Librarian of Pawtucket Memorial Hospital and of Sturdy Memorial Hospital, came once a week for several months and catalogued three cases of books in the original Davenport Collection and helped us to catch up with the most important of recent acquisitions. Mrs. Judith Verrier worked full time during the summer months and performed many of the duties involving sorting, checking, and listing of gifts as well as helping with telephone and circulation. We are most grateful for their assistance.

Plans and Hopes: Cataloguing is the most pressing need and we hope that a part-time non-pro-

fessional who will do the "scut" work for us will leave the regular staff free to catch up with the present and deal with the past! And there are projects in slow progress, relegated to evenings and "work behind closed doors," such as finishing the updating of our holdings for the supplement to Austin's "Early American Medical Imprints, 1668-1820" (your Library owns several hundred entries), working with the rare books which involves both cataloguing and physical upkeep, updating the Society's Historical Catalogue, and reshelving the stacks.

Last but not least, *Our Gifts*: Gifts are always fun to acknowledge and this was a banner year for them. When Doctor Goldowsky gave up private practice, he presented us with a magnificent collection of books, prints, pamphlets, papers, letters and other archival materials. Doctor Ronchese, who had been one of our most generous benefactors, added to his "routine" gifts of journals and books by giving us his personal collection of Sherlock Holmes material consisting of books, scrapbooks, newspaper clippings, and pamphlets. These items will be added to those in the original Davenport Collection. Dr. Harold Calder gave us some interesting photographs and certificates. Books and journals were given by Doctors Adelman, Batchelder, Brody (a run of AEROSPACE MEDICINE commencing in 1949 and to be continued), Chaset, Dillon, Jesse P. Eddy, Gorfine, Happ, Horwitz, Merle M. Potter, Silver, Wing, and Zucker and from Mrs. Alfred E. King, Mrs. DeJong, Mr. David C. Hardman, and Mr. Morton W. Saunders. We received material from the Estates of Drs. Lewis Abramson and Edward S. Cameron. Other libraries both local and national, organizations, pharmaceutical firms, foundations, and government agencies have helped enrich our Library with contributions.

Another gift of a different sort but equally appreciated is the help we receive from the Executive Office staff . . . Mr. Farrell, Mr. Lynch, Mary Martin, Libia Souza, and Connie Iaccouci. We thank them!

MRS. HELEN E. DEJONG,
Librarian

* * *

COMMITTEE ON THE MEDICAL ASPECTS OF SPORTS

The 10th Post-Graduate Conference on the Medical Aspects of Sports is to be held at the John H. Chafee Social Science Center at the University of Rhode Island on Thursday, July 26, and Friday,

July 27. The program is directed for the education of physicians, athletic trainers, and physical education instructors.

Respectfully submitted:
A. A. SAVASTANO, M.D.
Chairman

* * *

APPENDIX B

PUBLIC NOTICES BY PHYSICIANS

*Approved by the House of Delegates of
the Rhode Island Medical Society
September 27, 1967*

TELEPHONE AND OTHER DIRECTORY LISTINGS

As an aid to the public specialty listings by physicians are permitted on the basis of specialty classification as listed by the RHODE ISLAND MEDICAL SOCIETY OFFICIAL ROSTER, and subject in addition to final approval by the Committee on Public Policy and Relations. All such specialty listing in any public directories should not be in bold type or otherwise prominent display type.

NEWSPAPER DISPLAYS

Newspaper displays are permitted, not to exceed two columns in width and two inches in depth, and not to exceed publication in more than six issues of each newspaper for a one-week period, to announce —

- The establishment of an office for the practice of medicine.
- To announce a change of office address.
- To announce resumption of practice after a term of duty with the Armed Forces of the United States, or after an absence from practice for a period of three or more months, except for vacations, or after a long period of illness.
- To announce the taking over of the practice of another physician.

OFFICE SIGNS

Office signs should list the physician's name and the abbreviation M.D., and should be consistent with local customs and precedents. Specialty listings may be placed on office signs with the Specialty as listed in the Society's Official Roster. Ordinary illumination of office signs is permitted.

(Continued on next page)

sible for physicians having night office hours, or residing in urban or rural areas, or where off-street lighting offers poor visibility of the physician's office entrance.

DISPLAY ADVERTISEMENTS IN PROGRAMS, ETC.

The Code of Ethics provides that "solicitation of patients, directly or indirectly, by a physician is unethical." It would appear that some paid display notices in programs, such as those prepared for charity organizations and the like, are a form of indirect solicitation, when the physician's name is listed as the donor of the cost for the display. Such paid displays, in the opinion of the Society, are not approved. The listing of a physician as a patron in a list is permissible.

* * *

APPENDIX C

ORGANIZED SPECIALTY GROUPS IN R. I.

The Council recommends to the House that the following eleven groupings of Specialty organizations in the State be recognized for appointment by them of a spokesman in the House of Delegates for the specialty if the proposed bylaw revisions are adopted on March 14.

1. *Rhode Island Society of Internal Medicine*
(To include also the R. I. Society of Allergy, the R. I. Dermatology Society, and the R. I. Gastroenterological Society)
2. *Rhode Island Chapter, American College of Surgeons*
(To include also the Providence Surgical Society, the R. I. Ophthalmological Society, and the R. I. Otolaryngological Society)
3. *Rhode Island Section, American College of Obstetricians and Gynecologists*
4. *Rhode Island Orthopaedic Society*
5. *Rhode Island Radiological Society*
6. *Rhode Island Chapter, American Academy of Pediatrics*
7. *Rhode Island Chapter, American Academy of Family Practice*
8. *Rhode Island Society of Pathologists, Inc.*
9. *Rhode Island District Branch, American Psychiatric Assoc.*
10. *Rhode Island Society of Anesthesiologists*
11. *Rhode Island Association of Emergency Room Physicians*

* * *

APPENDIX D

H.R. 2222—S. 444

HEALTH CARE INSURANCE ASSISTANCE ACT OF 1973 (Medicredit)

A Proposal for Federal Financing of Health Insurance

Medicredit will: (1) pay the full cost of health insurance for those *too poor* to buy their own; (2) help those who can afford to *pay a part* — if not all — of their health insurance premium (the less they can afford to pay, the more the Government would help out); and (3) see to it that no American will have to bankrupt himself because of the cost of a long-lasting, catastrophic illness.

(This bill addresses itself only to *financing* health care; other legislation and programs involve medical manpower supply and distribution, the method of delivering care, and other problems such as environment, health education, and peer review.)

ANALYSIS

Federal Contribution

The Government pays 100% of the premium for low-income beneficiaries (an individual and his dependents whose combined income for a taxable year would not give rise to any income tax liability) For others, the Government provides scaled participation ranging between 99% and 10%, favoring lower-income persons, in the payment of premiums for basic coverage. For all persons the Government pay in full the premium for catastrophic expense coverage. A table of allowable percentages for related income tax liabilities is included in the bill.

The extent of Government financial participation is determined by the extent of federal income tax liability of any individual in a particular year.

Incentives are contained in the bill to encourage the continuation of group coverage.

Health Insurance Certificates; Income Tax Credits oring lower-income persons, in the payment of premium by the federal Government is entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Eligible beneficiaries with whom the Government would be sharing the cost of premium could elect between a credit against income tax or a certificate. The carrier presents the certificates received in payment of premium to the federal Government for redemption.

Qualification of Participating Carriers

To participate in the plan, a carrier must qualify under state law, provide basic and catastrophic coverage, make coverage available without excluding pre-existing health conditions, and guarantee annual renewal. An assigned risk insurance pool among carriers would be utilized as appropriate.

There will be open enrollment for individuals upon becoming newly eligible under the program, or to continue coverage without interruption. In other cases there will be two 30-day general enrollment periods each year during which qualified coverage may be purchased.

Health Insurance Coverage

A qualified policy offers comprehensive insurance against the ordinary and catastrophic expenses of illness (which would include all physicians and hospital services). As *Basic* benefits in a 12-month period: 60 days in a hospital (or in a skilled nursing facility, on a two days for one hospital day basis); all medical and surgical services (diagnostic, therapeutic, and preventive) in or out of the hospital; any hospital emergency or outpatient services and home health services. Also, comprehensive dental care for children and emergency dental care for all. As *catastrophic* benefits: any hospital days in excess of the 60 basic days, and up to 30 additional skilled nursing facility days; outpatient blood inpatient blood is a basic benefit); and prosthetic appliances.

Deductibles and Co-payments

Basic benefits are subject to a \$50 deductible per hospital stay; and 20% co-payment of the first \$500 of expenses of the family for each of the following three categories: (1) medical and surgical care; (2) emergency room, outpatient, and home health care; and (3) dental care.

Catastrophic benefits are subject to a deductible based on the family's taxable income, that is, income remaining after all tax deductions and personal exemptions. The catastrophic deductible is 10% of taxable income, reduced by any deductibles and co-payments paid by the family toward its basic benefits.

Families under federal cash assistance programs are eligible for payment by the State of any deductibles or co-payment.

Health Insurance Advisory Board

A Health Insurance Advisory Board of eleven members, including the Secretary of HEW and the Commissioner of Internal Revenue, will be appointed by the President, with Senate approval. A

majority of the Board will be practicing physicians and a dentist. The other members will be qualified by virtue of education, training, or experience. The Board will establish minimum qualifications for carriers, and in consultation with carriers, providers and consumers, will develop programs designed to maintain the quality of health care and the effective utilization of available financial resources, health manpower, and facilities. It will report annually to the President and Congress.

* * *

APPENDIX E

A DEMONSTRATION PROJECT FOR THE EARLIER DETECTION OF BREAST CANCER

The following is a summary of a proposed project for the earlier detection of breast cancer. This project will be sponsored under the auspices of the Rhode Island Department of Health, the Rhode Island Division of the American Cancer Society and the Multiphasic Screening Center of the Rhode Island Hospital. The Multiphasic Screening Center was chosen because it is a facility with trained personnel which is known throughout the state and has the added advantage of its own parking lot. The project proposes to utilize these organizations, their staffs and their facilities in an effort to conduct, over a two year period, a statewide screening program designed to demonstrate the feasibility and practicality of screening for earlier detection of breast cancer, utilizing history, clinical, radiographic and thermographic examinations and to compare the techniques and combinations thereof.

The program will also identify the target population for future efforts on the basis of risk factors, evaluate the various techniques required by variations in demographic characteristics, socio-economic status, accessibility to medical care, health attitudes, and to explore and demonstrate, where possible, the role of allied health professionals in the various stages of a screening program.

The project will attempt to screen between 5,000 and 6,000 women in the first year and 7,000 to 8,000 women in the second year.

Funding for the program will be provided through a combined National effort of the National Cancer Institute and the American Cancer Society. This project is being proposed as one of twenty throughout the country to be jointly funded by the American Cancer Society and the National Cancer Institute. It is anticipated that the budget for the project will total \$225,000 in the first year

(Concluded on next page)

and \$200,000 in the second year. The bulk of the funds are for personnel and equipment. There will be no charge to the patient.

Proposed starting date is 1 July 1973 and to continue through 30 June 1975. Application for the funds will be made by the Rhode Island Department of Health, which will maintain overall supervision of the program activities and serve as a focal point for the collection of data. The Rhode Island Division of the American Cancer Society will coordinate and organize the efforts of the private sector in patient participation and education. The Multiphasic Screening Center will do the actual screening program utilizing the following techniques:

Each patient will have breast examination by palpation, thermography, xeroradiography and multiposition mamography. Palpation and thermography (using Barnes Model 101) provides screening without gamma radiation to patients or personnel. Xeroradiography using the Xerox 125 system adapted to a standard X-Ray unit, provides mamograms which can be read quickly and gives the advantage or marginal accentuation and differs markedly in appearance from conventional films.

With a tandem method utilization examination by para-medical personnel with medical supervision, improved mammography, thermography and xeroradiography, it is felt that a practical method of accurate and efficient screening can be developed.

By combining the xeroradiography technique with mammography, it is hoped that greater accuracy can be reached in questionable cases. The Multiphasic Screening Center presently operating at Rhode Island Hospital could thus screen at the rate of 6,000-7,000 patients per year with a combined program incorporating xeroradiography, thermography and mammography. The relative accuracy and cost of the different modalities in the early detection of breast cancer would then be determined.

We had originally thought that several screening locations would be more practical for Rhode Island however, we are advised that the policies established by the NCI and the ACS will allow funding for only one location per area. However, the project will give us the opportunity to study the practicality of centralization of facilities in Rhode Island.

It is hoped that the successful demonstration of the feasibility and practicality of screening will

encourage additional facilities to undertake similar programs and to provide here in Rhode Island an opportunity for our population to participate in a joint public and private effort to evaluate their health status.

It is with these goals and intentions that the Department of Health seeks the approval of the Rhode Island Medical Society.



REMARKS OF THE PRESIDENT

(Concluded from page 358)

stantly reinforced by daily psychological transactions.

Why then are we assembled here? The answer is a simple one. We must all seek methods by which the pertinent new paradigms and new knowledge may be communicated promptly and, even more importantly, used. It is one thing to be aware of new knowledge; it is another to put it to practical use. Newton's laws of inertia apply in all human affairs and especially to the change of practice patterns and psychological habits. The librarians will be charged to sort out the pertinent material from the redundancy. Methods of retrieval can be improved. Administrators must be willing to support their libraries and the programs for retrieval. They must sponsor the necessary lectures and seminars, and make available the necessary space and technical and teaching aids.

ACCREDITATION OF PROGRAMS

The Medical Society, as we will learn later this morning, will attempt to give guidance to such programs by review, suggestions, approval, and *accreditation*. In keeping with our traditional role we shall give positive support to all efforts to improve competence. We perceive that by our peer review mechanisms, review of utilization patterns and use of PAS and MAP* data, we shall be able to show where competence may be improved upon, direct that it be done, and apply those sanctions which are available to us to members who fail to do so.

We are not adverse to the establishment of some mechanisms by which recognition of the practi-

*Professional Activities Survey (PAS) and Medical Audit Program (MAP) of the Commission on Professional and Hospital Activities of Ann Arbor, Michigan.

tioner for his continued efforts will be given. This is a practical, pragmatic, political solution to vociferous critics; but the mere physical presence in a scheduled program of continuing education is not continuing education. There is nothing at the moment that can deprive a man of his license if he does not continue his medical education, nor do we feel that the legislature or a regulatory body established by the legislature granted the sanction of relicensing is a really practical or worthwhile solution. If some recognition must be given, recertification is infinitely better, but its techniques must be carefully examined, and it is in no way a simple solution.

CONCLUSION

Organized medicine, and especially the Rhode Island Medical Society, has a prime concern in continuing medical education. We enlist all the help of all of you in achieving realistic goals without beclouding the issues by clichés or by over-concerns with the techniques instead of the goals. One of the great aphorisms in medicine is that of the great Boerhaave who said "All theoretical discussion stops at the bedside." Let me then get us all to the bedside of "the seminar on continuing medical education."



ACCREDITATION OF CME AT THE STATE LEVEL

(Concluded from page 365)

ing their own accreditation systems. The wheels do not turn rapidly, but in the first 15 months of encouraging local state level accreditation eight state medical societies have already had their accrediting mechanisms approved. One of them has already been implementing its plan for more than 1½ years. It is our sincere hope that the logic of this "grassroots" state level accrediting can appeal to many more state medical societies and that the state societies can help their members and their non-members in this way, ultimately for the benefit of their patients.

ACCEPTANCE OF STATE SOCIETY ROLE

Some state society executives and officers expressed the fear that AMA will be a "big brother." This has not happened, nor is it expected to. We at the AMA feel most strongly that the State medical societies must "do their own thing." We have provided them with the opportunity in the form of Essentials and other helpful documents. In no way is state-level accreditation a threat to

the individual physician, to his society, or to the hospitals; rather it is a helpful mechanism designed to help all of these individuals and institutions meet their obligations to society more easily.

There has also been some fear that an accrediting program within the state society would raise the budget costs in terms of time, facilities, and personnel. Again, this has not proved to be the case. The Pennsylvania Medical Society was the first to develop an accrediting plan which asked the community hospital and other local institutions and organizations desiring a survey to pay the costs of the survey teams plus an additional modest fee for the overhead involved. It is likely that such a fee-charging system will obliterate the need for any appreciable increase in the society budget. We have also found that most state societies can absorb the survey planning time and paper work involved through their staffs as they presently exist, or by additions to the staffs who would devote only a very minor part of their time in most instances to an accreditation program.

The AMA department of continuing medical education hopes that each state medical society in the long range future will have its own accreditation plan, implemented at state level, and serving its members as well as its non-members in a good capacity. In my own personal experience I have found that a good many practicing physicians have found a new way to identify the help which the state medical society provides them. In fact, some practicing physicians have realized that the state medical society is on their side all the way and is a good organization for personal membership. State level accreditation reaches out far beyond its own membership when the state society surveys a community hospital. It has a beneficial impact on all physicians. It should help improve state society membership rosters. It should help to improve patient care.



ONE SENTENCE ESSAY

I drink only to make other people interesting.

BAR-ROOM GRAFFITO



ONE SENTENCE ESSAY

Discussion is a method of confirming others in their errors.

... AMBROSE BEIRCE



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* * *

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5771 Kilmer Lane
Indianapolis, Indiana 46250
Internal Medicine, Pulmonary

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134 Welcome Way
WPAFB, Ohio 45433
Family Practice

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Durham, No. Carolina 27707
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Mountain Top Area Medical Center
P. O. Box 208
Snow Shoe, Pennsylvania 16874
General Practice

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Oklahoma City, Oklahoma 73112
Internal Medicine

* * *

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Plymouth Meeting, Pa. 19462
General Surgery

* * *

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London, Ontario
Canada
General Practice

* * *

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Otologic Medical Group, Inc.
2122 West Third Street
Los Angeles, California 90057
Otolaryngology



DERMAQUIZ ANSWER

(See Page 374)

Psoriasis



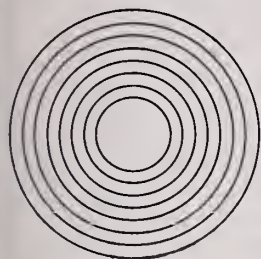
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Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increase and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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October 1973
Vol. 56, No. 10

BALCONY



Newsletter
Enclosed



Everybody experiences psychic tension.



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Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

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Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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Rhode Island Medical Journal

OCTOBER, 1973

Volume 56, No. 10

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(Concluded on page 394)

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Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

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sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights.

In most instances when adverse reactions were reported, they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Drowsiness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

sleep for 7 to 8 hours without need to repeat dosage

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

sleep with
consistency

Dalmane (flurazepam HCl) is a distinctive sleep medication—a benzodiazepine specifically indicated for insomnia. It is not a barbiturate or methaqualone, nor is it related chemically to any other available hypnotic.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, non-barbiturate agent proved effective and relatively safe for relief of insomnia.

Dalmane has been shown to be consistently effective even during consecutive nights of administration, with no need to increase dosage.

DALMANE[®]

(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



ROCHE LABORATORIES
Div., Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"Prescription drugs – who should determine the maker?"

Dispenser of
Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of
Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent . . . ?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to the patients . . .

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 25

should be an obligation of medical practice...

"Medical societies ought to conduct continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care. For 30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that few courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could allow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

Summary

In short, what the American Pharmaceutical Association advo-

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



ROCHE announces
new

BACTRIMTM

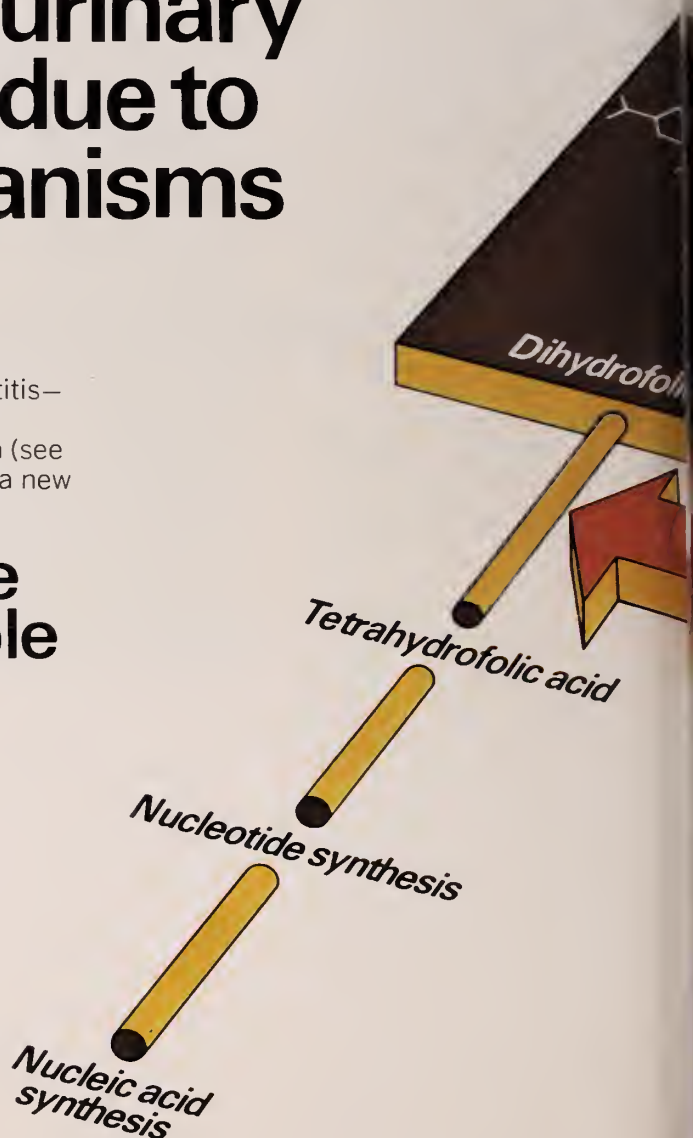
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

Bactrim is highly effective in the treatment of these infections – primarily pyelonephritis, pyelitis and cystitis – when due to susceptible organisms. This efficacy is related to the unique mode of action against bacteria (see illustration), an action that, in effect, makes Bactrim a new type of antibacterial.

Bactrim interrupts the life cycle of susceptible bacteria

Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.



Excellent clinical response in chronic urinary tract infections even with obstructive complications

A multiclinic, double-blind study* of response to a ten-day course of therapy in 471† patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim, compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. More than half of these patients had obstructive complications.

Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after a ten-day course of therapy with Bactrim, 68.4% of patients with chronic urinary tract infections *maintained* response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. These results are particularly noteworthy considering the number of patients with obstructive complications — cases regarded as being notoriously difficult to treat.

Prescribing considerations

Clinical Limitations: Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections. Not recommended for children under twelve.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period.

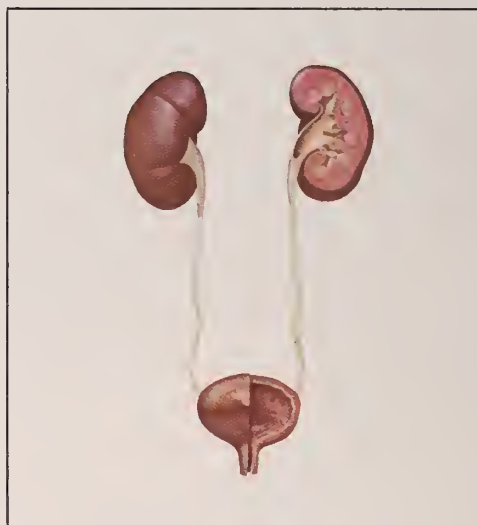
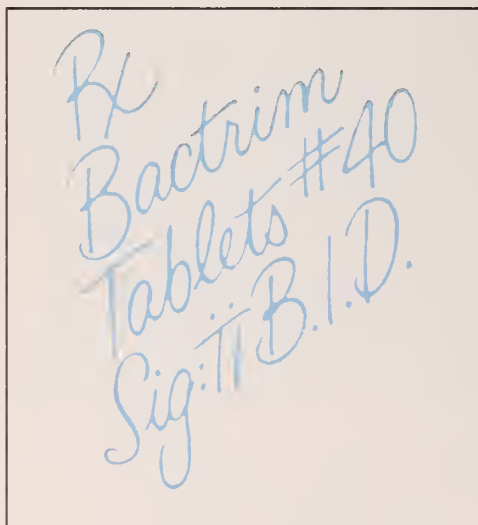
Warnings and Precautions: Both sulfamethoxazole and trimethoprim have been reported to interfere with hematopoiesis. Complete blood counts should be done frequently. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued. Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. Maintain adequate fluid intake. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

Adverse Effects: Among the most common side effects are nausea, vomiting, rash, leukopenia and elevations in SGOT and creatinine.

Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110

†4 patients not available for evaluation at day 10.



new **BACTRIM**™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

for chronic urinary tract infections



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Complete Product Information:

Description: Bactrim is a synthetic antibacterial combination product, available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl)pyrimidine. It is a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is *N*-(5-methyl-3-isoxazolyl)sulfanilamide. It is almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

Actions: *Microbiology:* Sulfamethoxazole inhibits bacterial synthesis of dihydrofolic acid by competing with para-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

In vitro studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

In vitro serial dilution tests have shown that the spectrum of antibacterial activity of Bactrim includes the common urinary tract pathogens with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)

Bacteria	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20)	
			TMP	SMX
<i>Escherichia coli</i>	0.05—1.5	1.0 —245	0.05—0.5	0.95— 9.5
<i>Proteus</i> spp.	0.5 —5.0	7.35 —300	0.05—1.5	0.95—28.5
Indole positive <i>Proteus</i>	0.5 —1.5	7.35 — 30	0.05—0.15	0.95— 2.85
<i>Klebsiella-Enterobacter</i>	0.15—5.0	0.735—245	0.05—1.5	0.95—28.5

Human Pharmacology: Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to four hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. After repeated administration, the steady-state ratio of trimethoprim to sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the therapeutically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma increases the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than in the concentrations in the blood. When administered together as Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

Indications: Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

Important note: Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period (see Reproduction studies).

Warnings: Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

Precautions: Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

Adverse Reactions: For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

Blood dyscrasias: Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglobinemia.

Allergic reactions: Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

Gastrointestinal reactions: Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

C.N.S. reactions: Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

Miscellaneous reactions: Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarthritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

Dosage and Administration: Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

How Supplied: Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

Reproduction Studies: In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.

BACTRIMTM

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Pretend it's 1958. Would you invest in hula hoops?



If you put \$100,000 into hula hoops in 1958, you might be a millionaire today.

Then again, you might be broke.

In making short-term investment decisions, timing is crucial. And the results of such decisions become obvious almost overnight.

But while short-term results are interesting, they're only the beginning. It's how your original investment stacks up ten, fifteen, twenty years later that ultimately counts.

At Industrial National Bank, we've been investing funds for individuals and corporations for decades, and we've seen investment fads come and go. During that time, we've invested our clients' funds wherever imagination, professional

judgment and thorough research indicated we should.

We think our philosophy has paid off — with consistent, strong long-term performance. We're proud enough of our long-term record that we take a back seat to no one in the business of professional financial management.

In fact, we'd like to discuss that record with you, and to show you how our combination of the right people, the right philosophy, and the right organization can bring a realistic new performance orientation to the management of your investments.

Call Mr. Evans at 278-6607. Trust Department, Industrial National Bank, 100 Westminister Street, Providence, Rhode Island 02903.

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Something extra



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

MEDICAL EVENTS CALENDAR

Wednesday, November 7, 1973

HEMORRHAGIC SHOCK

Henry T. Randall, M.D.
Surgeon-in-Chief
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Wednesday, November 7, 1973

41ST ANNUAL JOHN F. KENNEY CLINIC DAY

9:30 a.m. — Registration

Pawtucket Memorial Hospital
Nurses' Auditorium

10-12:00 — Presentation of Papers by hospital staff

12:00 noon — Buffet

1:30 p.m. — "IS SURGERY FOR GALLSTONES OBSOLETE?"
Lester F. Williams, Jr., M.D.

MANAGEMENT OF SHOCK

Teruo Matsumoto, M.D.

**ACUPUNCTURE AND ACUPUNCTURE ANESTHESIAS IN
THE PEOPLES REPUBLIC OF CHINA**

Tsung O. Cheng, M.D.

ACUPUNCTURE IN THE UNITED STATES

Teruo Matsumoto, M.D.

Wednesday, November 14, 1973

BLOOD CLOTTING MECHANISM AND HEMOPHILIA

George F. Meissner, M.D.
Associate Director, Department of Pathology
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Thursday, November 15, 1973

**SOME COMMON AND EXTRAORDINARY PROBLEMS IN
OUTPATIENT PSYCHOTHERAPY WITH ADOLESCENTS**

Donald J. Holmes, M.D.
Coordinator of Residency Training in Psychiatry
Maricopa County General Hospital, Program
Director, Phoenix Westside Project in Commu-
nity Psychiatry; Author, The Adolescent in Psy-
chotherapy; Teaching Consultant, Arizona State
Hospital Residency Program

Butler Hospital
Ray Hall
4:30 — 6:00 p.m.

MEDICAL EVENTS CALENDAR

Friday, November 16, 1973

HYPERTENSION IN CHILDHOOD

John D. Crawford, M.D.
Boston, Massachusetts

Roger Williams Gen. Hosp.
Kay Auditorium
10:30 a.m. to 12:00 noon

Saturday, November 17, 1973

ONCOLOGY: RECENT ADVANCES IN DIAGNOSIS AND TREATMENT

Presented by the Rhode Island Chapter of the
American College of Surgeons

Rhode Island Hospital
George Auditorium
8:30 a.m. to 12:30 p.m.

Wednesday, November 21, 1973

THROMBOSIS, EMBOLISM, AND ANTICOAGULATION

Irving Beck, M.D.
Medical Staff
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Wednesday, November 28, 1973

OSTEOPOROSIS, GOUT, AND CRYSTAL DISEASE

Stephen Kaplan, M.D.
Rheumatologist
Roger Williams Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Thursday, November 29, 1973

NORMAL ADOLESCENCE

Daniel Offer, M.D.
Associate Director, Institute for Psychomatic
and Psychiatric Research and Training; Vice-
Chairman, Department of Psychiatry, Michael
Reese Hospital and Medical Center; Associate
Professor of Psychiatry, Pritzker School of Med-
icine, University of Chicago; Editor-in-Chief,
Journal of Youth and Adolescence

Butler Hospital
Ray Hall
4:30 p.m. to 6:00 p.m.

Wednesday, December 5, 1973

JOINT MOTION AND LUBRICATION

Rosario Tomaselli, M.D.
Orthopedic Staff
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

THE BROWN UNIVERSITY MEDICAL CURRICULUM

At the present time, the core of the four year Program in Medicine at Brown University is comprised of 27 subjects and a complement of elective time corresponding to about eight additional courses. The subjects included in the curriculum were mandated in part by a need to comply with the licensing stipulations in various states. More significantly, however, they represented the product of earnest deliberations of two faculty-student committees which labored for over six months in constructing the guidelines and building blocks of a rigorous yet contemporary medical curriculum. The recommended course sequence would, in their judgments, develop physicians who would be both scholarly and professionally competent. The plan summarized in the accompanying table has been accepted by the American Medical Association — Association of American Medical Colleges Liaison Committee on Medical Education and the faculty of the Division of Biological and Medical Sciences of the University.

Required Courses

Year I:

Systems physiology;
Human morphology (gross anatomy, developmental anatomy, histology);
Biochemical pharmacology;
Medical microbiology and immunology;
General pathology;
Clinical psychology;
Medical sociology;

Summer: Clinical behavioral Sciences;
Clinical methodology.

Year II:

Integrated Medical Sciences (Pathophysiology, cardiology, nephrology,

pulmonary diseases
hematology
gastroenterology
endocrinology
human growth and development
infectious diseases and parasitology

Laboratory medicine:

Neurosciences (neuroanatomy, neurophysiology, neuropharmacology, neuropathology, neurology).

Year III and IV:

Mandatory clerkships:

Medicine
Surgery
Human growth and development (obstetrics, neonatology, pediatrics)
Community health
Psychiatry
Clinical Clerkship (subject left to discretion of student)

Electives (equal to about six months)

additional clinical clerkships,
basic science or university courses, and/or
research

It was readily acknowledged by the planners of the curriculum that no educational framework could be regarded, for more than a brief time, as satisfactory; clearly, the curriculum had to anticipate and reflect both the new ways in which medical problems might come to be viewed, the evolving needs and expectations of the community in terms of health care systems, and the ever-enlarging body of medical knowledge. The Curriculum Committee was therefore made a permanent body to review constantly the course of study.

(Continued on next page)

It was also recognized that compartmentalization exemplified by the assignment of teaching responsibilities to virtually autonomous departments, was not as effective a didactic instrument as carefully designed, integrated teaching. Every effort was exerted, therefore, to cross disciplinary lines and to involve practitioners and scientists of many persuasions in the total curriculum. The second year program, indeed, represents a major attempt to teach organ pathophysiology by using teams of health scientists and physicians whose skills confer greater perspective to the organ systems under inquiry.

It is both unrealistic and educationally indefensible to assume that only those in the medical profession are capable of contributing materially to the education of medical students. The Program in Medicine gratefully acknowledges, as well, the meaningful contributions to its curriculum by the

general faculty of Brown University. Members of various departments, including sociology, psychology, the chaplain's office, religious studies, philosophy, and engineering shall or will participate actively in courses concerning psychiatry, medical jurisprudence, human growth and development, community health, medical ethics, human sexuality, epidemiology, and orthopedic surgery.

Two questions will require further discussion: Is the present course of study likely to produce specialists, generalists, or both? Will the student be technically competent to enter the first year of residency without internship experience? The answers to these may only be determined with the passage of time.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs



COVER

(Concluded from page 390)

incorporators met on March 15, 1873, and named a Board of Trustees, who elected Henry Ledyard as their President.

Under the leadership of Mr. Ledyard, a wooden structure was built on Friendship Street that housed twelve beds for patients. The building lot, hospital and furnishings cost \$17,000.

A medical board of doctors was chosen, composed of: Doctor David King, Jr., Consulting Physician; Doctor E.S.F. Arnold, Consulting Surgeon; Doctor Henry E. Turner; Doctor Austin L. Sands; Doctor William Hunter Brickhead; and Doctor George Engs, who served the Hospital and the Community without pay.

The first patient was received in the new hospital on November 22, 1873.

One hundred years later, the Newport Hospital is housed in a structure containing 225 beds worth more than \$15,000,000. A medical staff of 55 doctors represents capability in almost every field of medicine. Although statistics showing a century of growth are impressive, the Hospital remains a community project, attuned to the needs of the community.

The Centennial Year of 1973 was marked by two events that indicated the Hospital's ability to respond appropriately to the beginning of its second century: the inauguration of a Nuclear Medicine Department with a modern radioisotope laboratory and the opening of the first comprehensive Community Mental Health Center in the state of Rhode Island.

The Newport Hospital will pause briefly in October and November of 1973 to honor its founding, then continue with its work of caring for the ill of the people whom it serves.

PHYSICIAN PAGING AT PROVIDENCE CIVIC CENTER

Providence Civic Center officials ask physicians to register at the box office when they are on call or expecting a call when attending events at the Center. By registering at the box office with name and seat location, the doctor will then be located and notified by an usherette of the call.

Peripatetics

ROBERT V. LEWIS, Immediate Past President of the Society, and TIM NORBECK, Executive Secretary, recently attended a meeting on PAS-MAP (Professional Activities Study-Medical Audit Program) in Hartford, Connecticut.

* * *

MISS MARY MARTIN, Membership Secretary for the Society, was recently married to Mr. Lawrence Sciarra. The couple will make their home in Warwick. Mrs. Sciarra will continue her association with the Society.

* * *

ALAN R. G. WALLACE was recently sworn in as a new appointee of an expanded Governor's Permanent Council on Drug Abuse Control. Doctor Wallace, a member of the Medical Society's Committee on Drug Abuse, is the Society's delegate to the Governor's Council.

* * *

PETER P. REILLY has been named executive director of the Providence Child Guidance Clinic. He is a former director of the Blue Hills Program in Boston, affiliated with the Boston Juvenile Court.

* * *

HENRY S. M. UHL, former Director of Professional Affairs at St. Joseph's Hospital and Chairman of the Society's Committee on Continuing Medical Education, has accepted a new position as Director and Coordinator of Education at the University of North Carolina School of Medicine at Asheville. Doctor Uhl will also hold the title of Clinical Professor of Medicine at the North Carolina Medical School. HOWARD S. BROWNE, JR. is the chairman of the Society's Continuing Medical Education Committee.

* * *

DAVID J. KASS has been named to the active staff, Division of Psychiatry of The Miriam Hospital. Doctor Kass will work part time at The Miriam Hospital and part time at Butler Hospital.

* * *

JACK M. MONCHIK has been named Assistant Surgeon, Department of Surgery, at the Rhode Island Hospital. Doctor Monchik will work with Dr. Horace Martin in setting up parathormone assay techniques in the Department of Pathology (Biochemistry). As Assistant Surgeon, Part Time Voluntary, Doctor Monchik was assigned to the Second Surgical Service and he will assume duties

as Assistant Surgeon as determined by the Chief of Service.

HAROLD G. CALDER celebrated his 92nd birthday in August and has accepted an invitation from Mrs. Helen DeJong, Society Librarian, to continue his excellent book reviews in the Journal.

* * *

ROBERT V. LEWIS has accepted an invitation to serve on the Brown University Graduate Medical Education Council.



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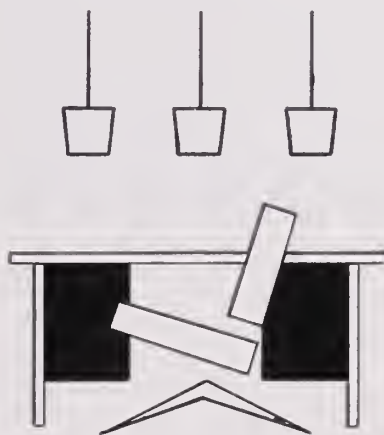
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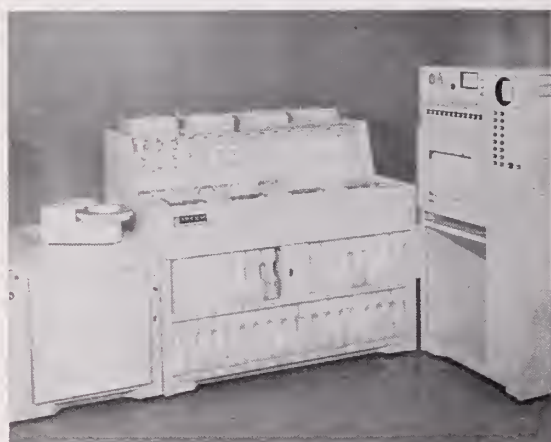
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Book Reviews

CURRENT DIAGNOSIS AND TREATMENT by Marcus A. Krupp, Milton J. Chatton, and Associate Authors. 1972 Revision. Los Altos, California, Lange Medical Publications, 1972. \$11.00.

A compendium of considerable value as a quick review to students and house officers, it is also useful to the practicing physician as a quick reference source. The material is given succinctly in thirty chapters covering the spectrum of medical diagnosis and treatment, each chapter with useful selected references. Additional material on Immunizations, travel, desensitization, resuscitation, and normal values are given in the appendix.

The thirty-six authors have updated their material and references, and the presentation is quite readable. Although I have had objections to books of this type, I have found it very helpful. Included are many useful tables reprinted from other sources such as table 18 "Most common laboratory findings in diseases associated with hypercalcemia."

A. SALTZMAN, M.D.

HERITABLE DISORDERS OF CONNECTIVE TISSUE by Victor A. McKusick. Fourth Edition. Saint Louis, The C. V. Mosby Company, 1972. \$32.50.

This fourth edition is, as were the previous ones, a mine of information on genetics, connective tissue disorders, and dermatologic rarities. As an example, there are 623 complete bibliographic quotations for the Marfan syndrome 297 for the Ehlers-Danos syndrome, and 202 for Pseudo anthoma elasticum. This should be of interest to the investigator as well as to the clinician in all branches of medicine. In particular the dermatologist should find ample inspiration in the chapters on Ehlers-Danos syndrome, Cutis laxa. Alkaptonuria, and Pseudoxanthoma elasticum.

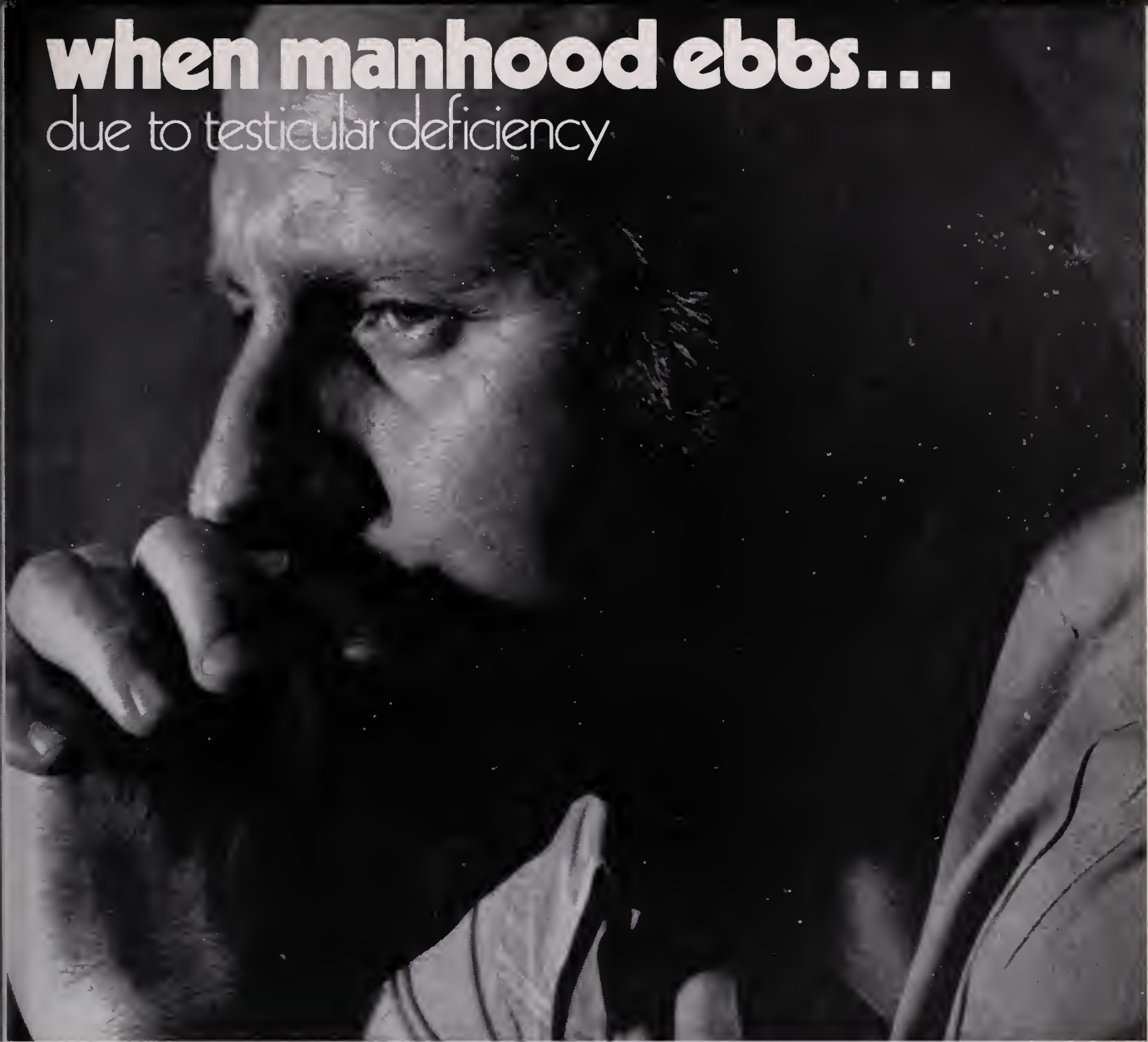
Terminology is still far from settled. I am glad it is recognized that cutis hyperelastica is not a synonym of Ehlers-Danos syndrome. Perhaps the future will find a satisfactory term for Cutis laxa.

Morquio (p. 583) was born Luigi Morchio in Genoa, Italy. The Kinky Hair syndrome (p. 720) seems a strange title when the hairs are shown twisted and not kinky. The Transverse Chest Keloid (p. 726) is considered hereditary and not traumatic. No dermatological patient with chest keloid ever admits a trauma, as the squeezing of a pimple is not considered to be one.

The author and the publisher are to be highly congratulated. F. RONCHESE, M.D.

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Contraindications: Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

Warnings: Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Same effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

Adverse Reactions: Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

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*Cecil-Loeb. Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermatt, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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Recommendations[†] on Combination Live Virus Vaccines

American Academy of Pediatrics

Committee on Infectious Diseases

In the September 15, 1971 AAP Newsletter sent to Academy members, the Committee on Infectious Diseases of the American Academy of Pediatrics stated its recommendations on the use of combination live virus vaccines. After a careful review of available data, the committee concluded that:

- "This information indicates that the products are both safe and effective when used as directed."
- The vaccine "...can, therefore, be recommended with the obvious advantages of reduction in the number of injections for any given child and a concomitant decrease in the required visits to a physician's office or clinic."

[†]For complete text of both recommendations see your MSD representative or write to Professional Service Dept., Merck Sharp & Dohme, West Point, Pa. 19486.

United States Public Health Service

Advisory Committee on Immunization Practices

In the April 24, 1971 issue of *Morbidity and Mortality Weekly Report*, the Advisory Committee on Immunization Practices of the United States Public Health Service presented recommendations on the use of combination live virus vaccines. The committee stated that:

- "Data indicate that antibody response to each component of these combination vaccines is comparable with antibody response to the individual vaccines given separately."
- "There is no evidence that adverse reactions to the combined products occur more frequently or are more severe than known reactions to the individual vaccines (see pertinent ACIP recommendations)."
- "The obvious convenience of giving already selected antigens in combined form should encourage consideration of using these products when appropriate."



M-M-R^{*}

(MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE | MSD)

Single-dose vials

M-M-R, given in a single injection, fits easily into your routine immunization program for well babies.

Given at age 12 months, M-M-R provides for vaccination early in life against measles, mumps, and rubella.

MSD suggested immunization schedule for well babies

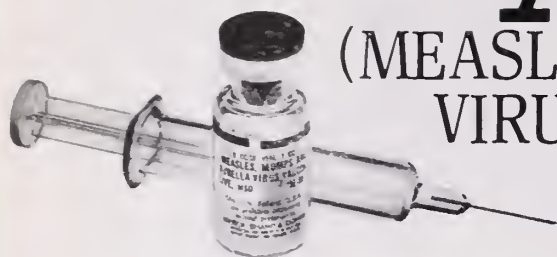
Age	Vaccine(s)
2 months	DPT (diphtheria-pertussis-tetanus) Oral poliomyelitis vaccine (triple)
3 months	DPT ¹
4 months	DPT Oral poliomyelitis vaccine (triple)
6 months	Oral poliomyelitis vaccine (triple)
12 MONTHS	M-M-R (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE, MSD)

1. This vaccination may be given at 3 months, 5 months, or at 6 months, depending on your preference or on the condition of the child.

Since vaccination with a live virus vaccine may depress the results of a tuberculin test for four weeks or longer, the test and the vaccine should not be given during the same office visit.

^{*}Trademark of Merck & Co., Inc.

For a brief summary of prescribing information, please see following page.



M-M-R

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No untoward reactions peculiar to the combination vaccine (M-M-R) have been reported.

Moderate fever (101-102.9 F) occurs occasionally. High fever (over 103 F) occurs less commonly. On rare occasions, children who develop fever may exhibit febrile convulsions. Rash (usually minimal and without generalized distribution) may occur infrequently.

Since clinical experience with measles, mumps, and rubella virus vaccines given individually indicates that very rarely encephalitis and other nervous system reactions have occurred, such reactions may also occur with M-M-R. A cause and effect relationship, however,

has not been established.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Must not be given to women who are pregnant or who might become pregnant within three months following vaccination.

Contraindications: Pregnancy or possibility of pregnancy within three months following vaccination; infants less than one year old; sensitivity to chicken or duck, chicken or duck eggs or feathers, or neomycin; any febrile respiratory illness or other active febrile infection; active untreated tuberculosis; therapy with ACTH, corticosteroids, irradiation, alkylating agents, or antimetabolites; blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic systems; gamma globulin deficiency, i.e., agammaglobulinemia, hypogammaglobulinemia, and dysgammaglobulinemia. **Precautions:** Administer subcutaneously; do not give intravenously. Epinephrine should be available for immediate use should an anaphylactoid reaction occur. Should not be given less than one month before or after immunization with other live virus vaccines; vaccination should be deferred for at least six weeks following blood transfusions or administration of more than 0.02 cc immune serum globulin (human) per pound of body weight, or human plasma.

Due caution should be employed in children with a history of febrile convulsions, cerebral injury, or any other condition in which stress due to fever should be avoided. The physician should be alert to the temperature elevation which may occur after vaccination.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Attenuated live virus measles and mumps vaccines, given separately, may temporarily depress tuberculin skin sensitivity; therefore, if a tuberculin test is to be done, it should be scheduled before vaccination, to avoid the possibility of a false negative response.

Before reconstitution, refrigerate vaccine at 2-8 C (35.6-46.4 F) and protect from light. Use only diluent supplied to reconstitute vaccine. If not used immediately, return reconstituted vaccine to refrigerator at 2-8 C (35.6-46.4 F), and discard after eight hours.

Adverse Reactions: Fever, rash; mild local reactions such as erythema, induration, tenderness, regional lymphadenopathy; parotitis; thrombocytopenia and purpura; allergic reactions such as urticaria; arthritis, arthralgia, and polyneuritis.

Occasionally, moderate fever (101-102.9 F); less commonly, high fever (above 103 F); rarely, febrile convulsions.

Encephalitis and other nervous system reactions that have occurred very rarely with the individual vaccines may also occur with the combined vaccine.

Transient arthritis, arthralgia, and polyneuritis are features of natural rubella and vary in frequency and severity with age and sex, being greatest in adult females and least in prepubertal children. Such reactions have been reported with live attenuated rubella virus vaccines. Symptoms relating to joints (pain, swelling, stiffness, etc.) and to peripheral nerves (pain, numbness, tingling, etc.) occurring within approximately two months after immunization should be considered as possibly vaccine related. Symptoms have generally been mild and of no more than three days' duration. The incidence in prepubertal children would appear to be less than 1% for reactions that would interfere with normal activity or necessitate medical attention.

How Supplied: Single-dose vials of lyophilized vaccine, containing when reconstituted not less than 1,000 TCID₅₀ (tissue culture infectious doses) of measles virus vaccine, live, attenuated, 5,000 TCID₅₀ of mumps virus vaccine, live, and 1,000 TCID₅₀ of rubella virus vaccine, live, expressed in terms of the assigned titer of the NIH Reference Measles, Mumps, and Rubella Viruses, and approximately 25 mcg neomycin, with a disposable syringe containing diluent and fitted with a 25-gauge, 5/8" needle. Also in boxes of 10 single-dose vials nested in a pop-out tray with a separate box of 10 diluent-containing syringes.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, Pa. 19486

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Books Received For Review

The Editor acknowledges the receipt of the following books and thanks the publishers for sending them. We shall have as many as possible reviewed. However, whether reviewed or not, the volumes are greatly appreciated and will be added to the Library's collection where they will be available to readers.

HANDBOOK OF MEDICAL TREATMENT.

Edited by Milton J. Chatton. Thirteenth Edition. Los Altos, Lange Medical Publications, 1972. \$6.50

CORRELATIVE NEUROANATOMY & FUNCTIONAL NEUROLOGY by Joseph G. Chusid.

Fifteenth Edition. Los Altos, Lange Medical Publications, 1973 \$8.50

REVIEW OF MEDICAL PHYSIOLOGY by Wil-

liam F. Ganong. Sixth Edition. Los Altos, Lange Medical Publications, 1973. \$9.00

PRINCIPLES OF CLINICAL ELECTROCARDIOGRAPHY by Mervin J. Poldman. Eighth

Edition. Los Altos, Lange Medical Publications, 1973. \$8.00

REVIEW OF PHYSIOLOGICAL CHEMISTRY

by Harold A. Harper. Fourteenth Edition. Los Altos, Lange Medical Publications, 1973 \$8.50

REVIEW OF MEDICAL MICROBIOLOGY by

Ernest Jawetz, Joseph L. Melnick, Edward A. Adelberg. Tenth Edition. Los Altos, Lange Medical Publications, 1972. \$8.00

CURRENT DIAGNOSIS & TREATMENT by

Marcus A. Krupp, Milton J. Chatton, and Associate Authors. Los Altos, Lange Medical Publications, 1973. \$12.00

SYNOPSIS OF SURGERY by Richard D. Liechty

and Robert T. Soper. Second Edition. Saint Louis, The C. V. Mosby Company, 1972. \$5.50

REVIEW OF MEDICAL PHARMACOLOGY by

Frederick H. Meyers, Ernest Jawetz, and Alan Goldfien. Third Edition. Los Altos, Lange Medical Publications, 1972. \$8.50

HANDBOOK OF PEDIATRICS by Henry K. Sil-

ver, C. Henry Kempe, and Henry B. Bruyn. Tenth Edition. Los Altos, Lange Medical Publications, 1973. \$6.50

BLOOD DISEASES OF INFANCY AND CHILDHOOD by Carl H. Smith. With the edi-

torial assistance of Denis R. Miller. Third Edition. Saint Louis, The C. V. Mosby Company, 1972. \$29.75

SURGERY IN WORLD WAR II. Orthopedic

Surgery in the Zone of Interior by the Medical

Department, United States Army. Washington, Office of the Surgeon General, 1970. U.S. Government Printing Office, \$12.25

A DECADE OF PROGRESS. The United States

Army Medical Department 1959-1969. Editor for A Decade of Progress, Rose C. Engelman, Ph.D. Office of the Surgeon General, Department of the Army, Washington, D.C., 1971. U.S. Government Printing Office, \$2.25

MEDICAL SPECIALTY TERMINOLOGY. Vol-

ume Two: X-Ray and Nuclear Medicine by Clara Gene Young and Joseph J. Likos. Saint Louis, The C. V. Mosby Company, 1972.

Many of the Library patrons are laymen and request books written in language they can understand. We have received the following volumes from publishers specializing in "popular" material. Most of the authors are physicians or scientists in fields relating to medicine:

STANDARD FIRST AID AND PERSONAL

SAFETY. Prepared by The American National Red Cross for the Instruction of First Aid Classes. Garden City, Doubleday & Company, Inc., 1973. \$3.50 hardbound; \$1.95 paperback.

(Concluded on page 436)

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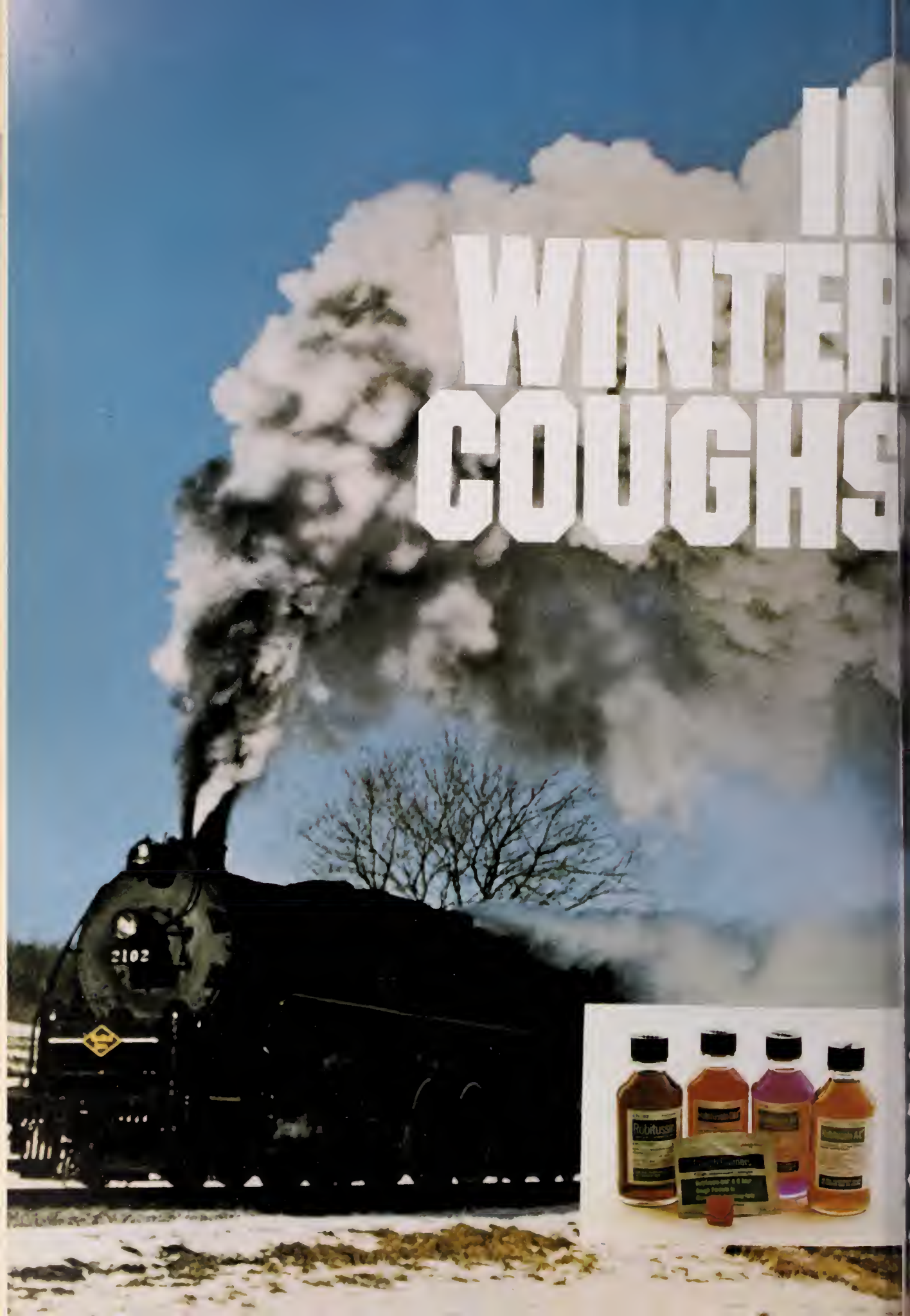
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Non-narcotic for 6-8 hr. cough control

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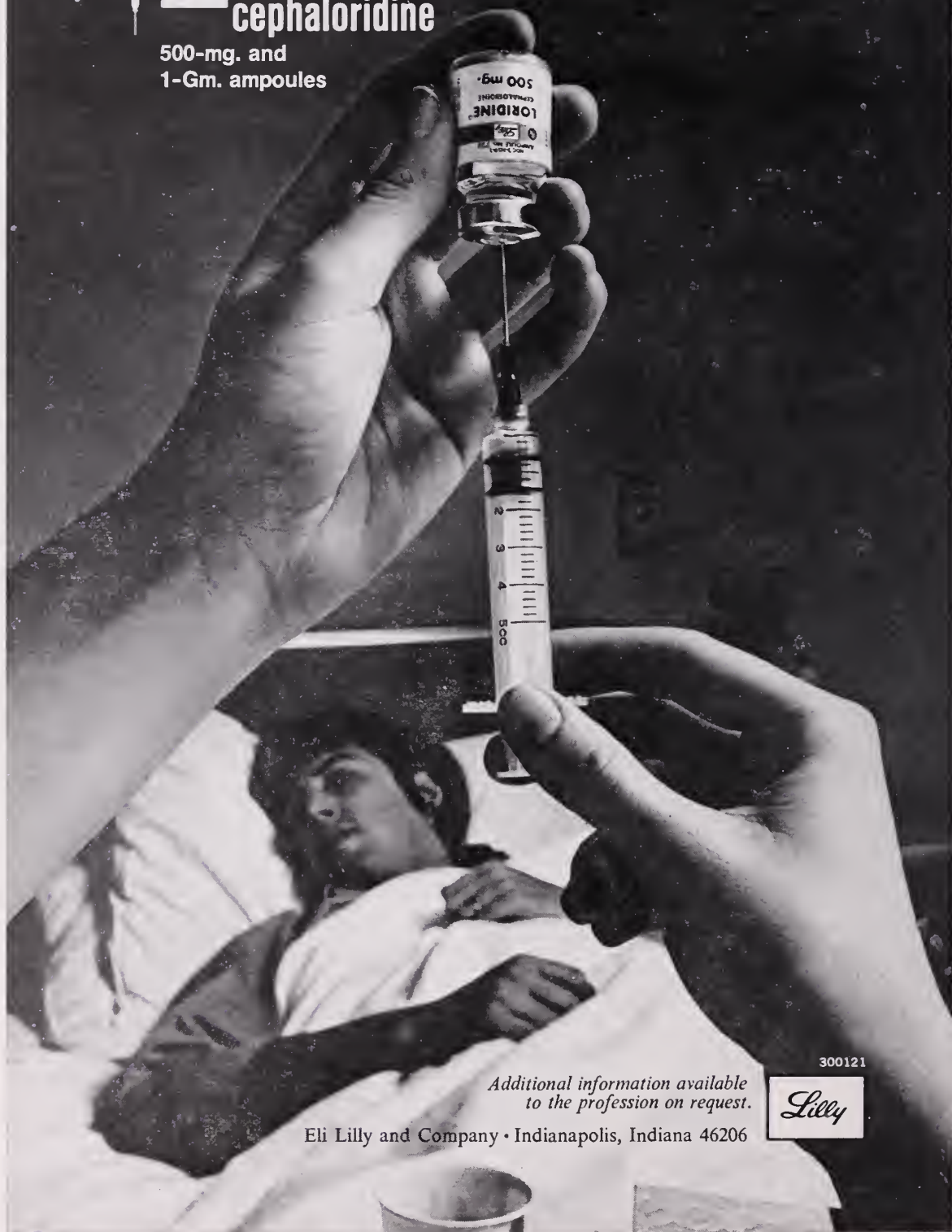
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Peer Review: A Comprehensive Appraisal

Proposal Provides A Comprehensive Plan For Coordinated Peer Review Throughout State Utilizing Currently Available Resources

By Seebert J. Goldowsky, M.D.

We shall attempt to define the roles of the various organizations that are either involved in or have an interest in some aspect of Peer Review. After identifying their respective potentialities, responsibilities, or obligations under the law, suggestions will be made as to how these activities may be coordinated. The entities to which consideration must be given are the Rhode Island Medical Society, the Hospital Association of Rhode Island (HARI), Rhode Island Blue Cross and Blue Shield, and a prospective Professional Standards Review Organization (PSRO) to be organized under the Bennett Amendment of HR1 (PL 92-603). An additional important element comprises the data bank provided by the Commission on Professional and Hospital Activities (CPHA) and its Professional Activity Study (PAS) and Medical Audit Program (MAP).

RESOURCES AVAILABLE

The Rhode Island Medical Society has a comprehensive Peer Review program, which, although

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Presented at meeting of the Rhode Island Medical Economics Council on November 14, 1972. On March 7, 1973, the Rhode Island Professional Service Review Organization, Inc. (R.I. PSRO, Inc.) received a state charter.

relatively new, appears to be working quite well. This consists of the State Peer Review Committee, which has overall management of the program; District Society Peer Review Committees; and Specialty Peer Review Committees nominated by the various specialty societies. The State Peer Review Committee is responsible for the delegation or processing of all inquiries or studies. It receives all questions and promulgates all decisions or recommendations.

The individual hospitals operate the conventional Peer Review procedures through the usual Committees, such as Medical Records, Tissue, Credentials, and Executive. More pertinent to the present problem are the Utilization Review and Medical Audit or Appraisal Committees. All hospitals in Rhode Island operate Utilization Review Committees, as required by Federal regulations under Medicare, Medicaid, and the Federal Employees Program (FEP). A very few have initiated Medical Audit or Appraisal Programs under PAS-MAP. All hospitals subscribe to the full PAS-MAP programs. HARI receives all PAS-MAP Summary Reports under agreement with the individual hospitals. Most of this material is merely stored, not used. Periodically HARI publishes a Comparative Length of Stay (LOS) study based upon the quarterly LOS packages for all hospitals, which it receives regularly from CPHA. These have proved to be very revealing and useful, but

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this is certainly minimal usage of the vast amount of data accumulated.

Blue Cross and Blue Shield have very significant amounts of material in their data bank. Much of the information necessary for Peer Review, however, is not available from this source because the computers were not programmed for retrieval of that type of data. In some respects studies were possible previously under manual operation which are not now possible with the computers. Such studies, however, were always laborious.

Blue Shield has recently contracted for, and is receiving, a Utilization Review Program making possible certain studies of patterns of care and the establishment of criteria of care on a comparative basis. We are informed that these data, applicable currently only to Medicare Part B, will soon be available for all Blue Shield business. These studies are addressed primarily to ambulatory and office care by physicians.

RECENT NATIONAL DEVELOPMENTS

The interest nationally in Peer Review has resulted in multicentric developments. The AMA some time back held a national conference on Peer Review and has devoted several symposia to the subject. Pursuant to this activity it has published and disseminated a Peer Review Manual which is directed primarily to the establishment of Peer Review Committees by medical societies.

The Joint Commission on Accreditation of Hospitals (JCAH) in the Fall of 1971 circulated its latest Standards on Medical Care Evaluation and Utilization Review. In addition to requiring what might be termed the Conventional Utilization Review Activities, it established standards for a "continuing, objective, and corrective analysis of clinical work." These are in part as follows:

- Develop working norms, with respect to length of stay, patient history, physical examination, laboratory, and radiologic findings, as well as consultant utilization. The existence of such norms will serve to permit the careful analysis of variations from usual practice, and will facilitate the rational assessment of justification for them.
- Establish an efficient method of reviewing all, or an equitable and representative sample of all, clinical work done in a reasonable brief expanse of time. The standards of the Joint Commission require that this be done at least monthly.

- Develop or identify criteria for the evaluation of medical care, based upon community, regional, and national experience. against which to measure the quantitative analysis of this hospital's clinical work load. Does the analysis show any substantial divergence from norms, with respect to variations in the case load? Are there justifiable reasons for this, such as the presence of special skills, special equipment, or differences in population served?

- Conduct medical care evaluation on a continuing basis, in such a manner that all of the usual clinical variants are reviewed and the self-determined criterion base is broadened and deepened.

The American Hospital Association (AHA) has recently recommended the adoption of a Quality Assurance Program (QAP). The QAP consists of a Medical Audit Program and a Utilization Review Program. The QAP manual states with reference to Medical Audit: "Data collection and record analysis are the essentials . . .," and continues, "The hospital should provide a computerized data service for this purpose Those hospitals already using a particular service or system will wish to adapt their existing system to this quality assurance program." PAS-MAP is mentioned as one of the available and suitable data collection and retrieval systems.

The Council on Medical Service of the AMA in a report to its 1972 Clinical Session recognizes Medical Audit as a function of the hospital medical staff and recommends: "That the AMA continue to urge insurance companies, Blue Shield and Blue Cross Plans, public agencies, computer services, and others concerned with the design and administration of health care financing programs to organize their statistical data and experience and make them available to peer review bodies for their use."

Matters have been more or less brought to a head by the passage of HR 1 with the attached Bennett Amendment (PSRO). The Amendment provides that a qualified PSRO for any "appropriate area" shall be defined as follows:

- The term "qualified organization" means (1) when used in connection with any area (a) an organization (i) which is a non-profit professional association, or a component organization, (ii) which is composed of licensed doctors of medicine or surgery in the area,

(iii) the membership of which includes a substantial proportion of all these physicians in the area, (iv) which is organized in a manner which makes available professional competence to review health care services of the types and kinds with respect to which PSRO's have review responsibilities under this program, (v) the membership of which is voluntary and open to all doctors of medicine or osteopathy licensed to engage in the practice of medicine or surgery in the area without requirement of membership in or payment of dues to any organized medical society or association, and (vi) which does not restrict the eligibility of any member for service as an officer of the PSRO or eligibility for and assignment to duties of the PSRO, or, subject to following provisions relating to time for eligibility, (b) another public, non-profit private, or other agency or organization, which the Secretary determines, in accordance with criteria prescribed by him in regulations, to be of professional competence and otherwise suitable; and (2) an organization which the Secretary, on the basis of his examination and evaluation of a formal plan submitted to him by the association, agency, or organization, as well as on the basis of other relevant data and information, finds to be willing to perform and capable of performing, in an effective, timely, and objective manner and at reasonable cost, the duties, functions, and activities of a PSRO required by this program. Among its functions will be the following:

- Each PSRO will, in accordance with regulations of the Secretary, determine and publish, from time to time, the types and kinds of cases, whether by type of health care or diagnosis involved, or whether in terms of other relevant criteria relating to the provision of health care services, with respect to which the organization will, in order most effectively to carry out the purpose of this program, exercise the above pre-admission approval authority.
- Each PSRO will be responsible for the arranging for the maintenance of and regular review of profiles of care and services received and provided with respect to patients, utilizing to the greatest extent practicable in these patient profiles, methods of coding which provide maximum confidentiality as to patient

identity and assure objective evaluation consistent with the purposes of this program. Profiles also will be regularly reviewed on an ongoing basis with respect to each health care practitioner and provider to determine whether the care and services ordered or rendered are consistent with the above criteria.

The PSRO will have "responsibility for the review of the professional activities . . . of physicians and other health care practitioners and institutional and noninstitutional providers of health care services." The PSRO may rely upon the institutional review committees if in its judgment they conform to the standards established by the PSRO:

- Each PSRO will utilize the services of, and accept the findings of, the review committees of a hospital or other operating health care facility or organization located in the area served by the organization, but only when and only to the extent and only for the time that the committees in the hospital or other operating health care facility or organization have demonstrated to the satisfaction of the organization their capacity effectively and in timely fashion to review activities in the hospital or other operating health care facility or organization including the medical necessity of admissions types and extent of services ordered, and lengths of stay, so as to aid in accomplishing the purposes and responsibilities of the PSRO, except where the Secretary disapproves, for good cause, this acceptance.

The PSRO will establish norms of health care for various illnesses or health conditions and utilize them as follows:

- Each PSRO will apply professionally developed norms of care, diagnosis, and treatment based upon typical patterns of practice in its regions (including typical lengths-of-stay for institutional care by age and diagnosis) as principal points of evaluation and review. The National Professional Standards Review Council and the Secretary will provide the technical assistance to the organization which will be helpful in utilizing and applying these norms of care, diagnosis, and treatment. Where the actual norms of care, diagnosis, and treatment in a PSRO area are significantly different from professionally developed regional norms of care, diagnosis, and treatment approved for comparable conditions, the PSRO
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concerned would be so informed. In the event that appropriate consultation and discussion indicate reasonable basis for usage of other norms in the area concerned, the PSRO can apply those norms in the area as are approved by the National Professional Standards Review Council.

- The norms with respect to treatment for particular illnesses or health conditions will include (1) the types and extent of the health care services which, taking into account differing, but acceptable, modes of treatment and methods of organizing delivering care, are considered within the range of appropriate diagnosis and treatment of the illness or health condition, consistent with professionally recognized and accepted patterns of care; (2) the type of health care facility which is considered consistent with these standards, to be the type in which health care services which are medically appropriate for the illness or condition can most economically be provided.
- The National Professional Standards Review Council will provide for the preparation and distribution, to each PSRO and to each other agency or person performing review functions with respect to the provision of health care services under the Social Security Act, of appropriate materials indicating the regional norms to be utilized. This data concerning norms will be reviewed and revised from time to time. The approval of the National Professional Standards Review Council of norms of care, diagnosis, and treatment will be based on its analysis of appropriate and adequate data.
- Each review organization, agency, or person will utilize the norms as a principal point of evaluation and review for determining, with respect to any health care services which have been or are proposed to be provided, whether the care and services are consistent with the criteria specified under this amendment.

The roles of fiscal intermediaries and Blue Cross and Blue Shield are envisioned in the following provisions of the Amendment:

- The Secretary, by regulations, will provide for the correlation of activities, the interchange of data and information, and other cooperation consistent with economical, efficient, coordinated and comprehensive implementation of this program, including, but not limited to,

usage of existing mechanical and other data-gathering capacity, between and among (a) (1) agencies and organizations which are parties to agreements entered into under Part A of medicare, (2) carriers which are parties to contracts entered into under Part B of medicare, and (3) any other public or private agency, other than a PSRO, having review or control functions, or proven relevant data-gathering procedures and experience, and (b) PSROs, as necessary or appropriate for the effective administration of medicare or state plans approved under the Social Security Act.

Concern has been expressed regarding the reimbursement of costs if Blue Cross and Blue Shield should become involved in these activities. The following provision appears to allay this fear at least in respect to Federal programs:

- Expenses incurred in the administration of this program will be payable from (1) funds in the Federal Hospital Insurance Trust Fund; (2) funds in the Federal Supplementary Medical Trust Fund; and (3) funds appropriated to carry out the health care provisions of the several titles of the Social Security Act; in such amounts from each of the above sources of funds as the Secretary deems to be fair and equitable after taking into consideration the costs attributable to the administration of this program with respect to each of the plans and programs.

COORDINATION OF PROGRAMS

The hospital aspect of Peer Review is partially implemented by the present Utilization Review Committees. The Medical Audit aspect is operative in a few hospitals and under development in a few others. The implementation of effective Medical Audit using PAS-MAP in all hospitals would fulfill their obligations under the Bennett Amendment (PSRO).

The Rhode Island Medical Society is currently exploring its role in establishing a statewide PSRO. Presumably this will be accomplished through a sponsored non-profit corporation having lay (consumer) and Osteopathic representation on its board and Osteopathic representation on its committees.* Presumably it would take over the func-

*Present plans call for an all physician Board of Directors including osteopaths and an Advisory Council on which laymen would serve.

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Oral Hypoglycemic Agents: The Pharmacological Basis Of Their Clinical Use

Agents Are Useful, But Caution Is Indicated In Long Term Use

By Frank Davidoff, M.D.

In this period when new drugs and new information about old drugs are being introduced with dizzying speed, it may be well to bring our historical perspective of oral hypoglycemic agents up to date.¹ From before the discovery of insulin the search for an anti-diabetic pill had led to the study of guanidine, and soon thereafter to the clinical use of the synthalins, decamethylene, and dodecamethylene diguanide*. Their development included a large measure of serendipity: investigations in the early 1900s into the mechanism of the newly-discovered tetany resulting from parathyroidectomy revealed both hypoglycemia and increased levels of "guanidine" in plasma². In retrospect both observations were probably artifactual, but they led at the time to the conviction that guanidine compounds were causally related to the hypoglycemia and might, therefore, be useful as hypoglycemic agents; hence a wide variety of guanidine derivatives were examined for hypoglycemic activity³. The synthalins were fairly widely used clinically until the introduction of

insulin, but their rather extensive toxicity, mostly renal and hepatic, caused them to drop quickly from view until the studies of biguanides in the mid-1950s led to the reintroduction of compounds of this type⁴. It may also be worth noting that the screening assay for development of antidiabetic compounds was predominantly their ability to lower blood sugar in normal animals. Since the blood sugar level is responsive to a tremendous array of controlling factors, and hyperglycemia is only one abnormality among many in the syndrome of human diabetes, perhaps not even a central one, it is perhaps not surprising that the oral antidiabetic agents developed according to the simple criterion of blood sugar lowering activity may be incompletely effective in control of the disease.

Discovery of the sulfonylureas again involved a dose of serendipity: during clinical trials in France of a series of sulfonamide-related compounds for antibacterial activity, several cachectic patients were found to become comatose. The etiology of the coma was found to be hypoglycemia, and Loubatières quickly recognized and developed the anti-diabetic potential of this family of drugs⁵.

MECHANISM OF ACTIVITY

Sulfonylureas. Through the work of Loubatières and others, the hypoglycemic properties of the sulfonylureas were soon found to depend on the islet cells of the pancreas⁵. Extra-pancreatic sulfonyl-

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*Note: Diguanide is the correct chemical nomenclature of a compound containing two monoguanidine groups separated by an alkyl group, while biguanide refers to two condensed monoguanides sharing a common nitrogen.

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lurea actions have long been sought, and the evidence concerning such actions has recently been reviewed⁶; it remains to be established, however, that activities of sulfonylureas outside the β -cells of the islets contribute significantly to their anti-diabetic properties in human subjects. Perhaps the major bit of clinical data supporting the β -cell as the prime target of sulfonylurea activity was the early observation that these drugs are ineffective in pancreatectomized humans or in totally insulin-dependent, ketosis-prone patients⁷.

The precise biochemical and physiological basis of sulfonylurea action on the β -cells has recently begun to emerge, largely from studies with a very elegant and flexible laboratory tool, the isolated, perfused pancreas preparation. The circulation of the pancreas is isolated and cannulated, permitting rapid changes in composition of the perfusion fluid and minute-to-minute assay of the effluent for insulin concentration by radioimmunoassay⁸. A sudden and sustained increase in perfusate glucose concentration causes insulin to be released in two phases: first a sharp peak with rapid rise and fall, completed within a few minutes, then a slower climb to a slightly lower plateau level of insulin release. The second phase of insulin output is inhibited by agents which block protein synthesis, while the first is not, indicating the first peak represents release of pre-formed insulin while newly synthesized hormone contributes to the second.

When a high concentration (i.e. 100 mg/liter) of a sulfonylurea such as tolbutamide is rapidly introduced into this pancreas preparation in the presence of a low glucose level, the high, short initial peak of pre-formed insulin is observed, but release is not sustained into a second phase. The phenomenon of rapid, short-lived insulin release in response to a large bolus of tolbutamide probably has its clinical counterpoint in the intravenous tolbutamide test for the presence of insulin-secreting islet cell adenomas. However, this kind of pharmacological maneuver bears little resemblance to the chronic, low levels of sulfonylureas introduced in the circulation during long-term oral therapy of mild, maturity-onset type diabetes. The manner in which such low sulfonylurea levels influence secretion has remained elusive until recently; interestingly enough it is once again the work of Loubatières⁹ which appears now to have established a clear understanding of the mechanism of such "low-level" therapy. Using the perfused pancreas, Loubatières first showed that by

itself a low concentration (i.e. 5 mg/liter) of tolbutamide was unable to stimulate insulin release. When, however, he first established a "steady-state" of second-phase insulin release by using a fixed glucose concentration, the further addition of a 5 mg/liter concentration of tolbutamide caused a striking increase in rate of insulin release. Through detailed explorations of this phenomenon, Loubatières has established the following important pharmacological principles: 1) low-dose sulfonylureas, although unable by themselves to stimulate insulin release directly, augment or amplify the strength of the glucose signal for insulin release of any given glucose level; and 2) the degree of amplification by sulfonylurea varies with the glucose concentration, i.e. amplification is relatively small with glucose concentrations below 100 mg per cent, reaches a maximum at a concentration of about 200 mg per cent, but then becomes very small again as the glucose concentration becomes very high.

These *in vitro* observations are really very exciting, since they explain a number of previously obscure aspects of sulfonylurea pharmacology. First, it has long been known that normal subjects who take therapeutic oral doses of sulfonylureas only rarely show decreases in fasting blood sugar, a phenomenon now understandable in view of the very small amplification of insulin-release signal at blood sugars below 100 mg per cent. Second, these same normal subjects challenged with a constant load of an insulin secretagogue such as leucine show a much augmented insulin output response on therapy than before it¹⁰, a clear demonstration of the amplifier mechanism. Third, a wide variety of studies in mild, maturity onset-type diabetics has demonstrated that the lowering of fasting blood sugar and the improved post-prandial glucose tolerance on sulfonylurea therapy is associated with little change in absolute circulating insulin levels when compared with pre-treatment insulin levels^{11, 12}. This, to many, has been an unexpected result, since the *a priori* assumption was that the improvement in glucose tolerance would prove to be caused by a direct, sulfonylurea-induced increment in absolute insulin output which was additive to the pre-existing signal provided by glucose (and amino acids). In fact, much concern arose in the earlier days of sulfonylurea therapy over the theoretical hazard of "driving" an already insufficient pancreatic β -cell even harder through direct sulfonylurea stimulation, leading possibly to accelerated exhaustion and per-

manent worsening of the diabetes. Instead, we are now reassured to find with sulfonylureas that any given blood sugar level is simply more effective *per se* as an insulin-release signal on sulfonylurea therapy than it was before treatment, and we now know that long-term sulfonylurea therapy does not worsen the severity of the metabolic abnormality¹³. Finally, the diabetic who responds best to sulfonylureas is the one whose pre-treatment blood sugars hover in the 200-250 mg per cent range¹³, as might be expected from the optimal "amplification" range of sulfonylureas observed by Loubatières. At blood sugars higher than this the glucose signal by itself is already essentially maximal, and no further increment from sulfonylurea might be expected.

A lot of interest has naturally focussed on the subcellular mechanism by which sulfonylureas amplify the glucose signal for insulin release. A major new hypothesis resulting largely from the work of W. Malaisse^{14, 15}, suggests that the final common trigger for all insulin-release signals including glucose, amino acids, glucagon, sulfonylureas, and others, is the concentration of free, ionized calcium within the soluble compartment of the β -cell. The evidence suggests that in the basal state Ca^{++} is constantly leaking out of the β -cell and being pumped back in; glucose apparently raises the intracellular Ca^{++} level, hence "turning on" insulin release, by directly inhibiting the outflow of Ca^{++} across the outer cell membrane. A second, relatively independent regulator of cellular Ca^{++} levels appears to exist in the form of cyclic 3', 5'-adenosine monophosphate (AMP) the now-familiar intracellular "second messenger" of most protein hormone systems. Malaisse proposes that cyclic AMP causes a shift of Ca^{++} from storage sites within intracellular microvesicles out into the free soluble compartment, thus "augmenting" the Ca^{++} triggering produced by glucose or any other signal. Sulfonylureas appear to cause a rise in the level of cyclic AMP in B-cells, thus providing an extra input of Ca^{++} into the free Ca^{++} pool. Although sulfonylureas have been shown to inhibit the cyclic AMP degrading enzyme¹⁶, i.e. phosphodiesterase, which could explain its ability to increase cellular cyclic AMP, the concentrations of drug needed to inhibit the enzyme *in vitro* are very high. A more reasonable explanation of the cyclic AMP increases induced by sulfonylurea comes from the work of Levey¹⁷ who has now shown that tolbutamide directly

of the anti-diabetic effects of biguanides has proven stimulates β -cell adenylyl cyclase, the plasma membrane-bound enzyme which forms cyclic AMP. The recent demonstration that sulfonylureas probably do not enter the β -cell¹⁸ supports the notion that their β -cell effects may result from an action exerted at the level of the plasma membrane rather than directly within the cell itself.

The indications that sulfonylureas are "amplifiers" of the cyclic AMP circuitry may be helpful in explaining another pharmacological effect of these agents. Some years ago it was observed that the symptoms in patients with partial deficiency of antidiuretic hormone, and moderate degrees of diabetes insipidus, were reversed by sulfonylurea therapy¹⁹. The effects of the antidiuretic hormone on the renal collecting ducts are now thought to be mediated at the cellular level by the cyclic AMP system²⁰. Although other explanations are possible²¹, the most plausible explanation of the antidiuretic effect of sulfonylureas is an "amplified" effect on the renal collecting ducts, similar to their action in the β -cells, which permits an otherwise inadequate amount of anti-diuretic hormone signal to generate a relatively large target organ response²¹. This property of sulfonylureas has added an important tool to the armamentarium for treatment of diabetes insipidus; however, it must be emphasized that similar potentiation of ADH activity may also occur in subjects *without* diabetes insipidus; as many as 4 per cent of diabetic patients on chlorpropamide may then demonstrate the syndrome of inappropriate antidiuresis, hyponatremia, and water intoxication. Thus, in mild diabetics on sulfonylurea therapy who develop signs and symptoms of water overload, this variety of sulfonylurea toxicity may be suspected as one possible etiologic factor; it has however, not been established that all forms of sulfonylureas now in clinical use will produce these problems of water balance.

Biguanides. Studies in the late 1950s established that, in contrast to the sulfonylureas, biguanides could lower blood sugar in pancreatectomized animals²⁴; however, biguanides could not fully replace insulin in its ability to achieve a relatively normal metabolic state. These observations confirmed work from 30 years previously which had demonstrated important qualitative differences between the mechanism of insulin and biguanide-induced hypoglycemia in intact animals²⁵. Although much work has been devoted to the prob-

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lem, further elucidation of the exact mechanisms to be a complex, elusive, and frustrating task.

One major source of confusion appears to have been the occurrence of qualitatively different metabolic effects at low *versus* high concentrations of the biguanides. Biguanides can lower the blood sugar of most normal experimental laboratory animals but the doses required are 20-200 times greater than those required for therapeutic effects in humans²⁶. Such doses are associated with rises in blood lactate levels, inhibition of hepatic gluconeogenesis, depression of glucose conversion to CO₂, and depletion of tissue glycogen stores. Most, if not all, of these physiologic changes probably result from inhibition of aerobic mitochondrial metabolism within the cell, with consequent stimulation of glycolysis in peripheral tissues through the Pasteur effect. Indeed for many years the only major subcellular effect which had been discovered for guanidine derivatives was their ability to block the coupled respiration of isolated mitochondria²⁷⁻²⁹, a fact which has been often quoted in support of a cause and effect relationship between respiratory inhibition and anti-diabetic activity³⁰. Biguanides at these high levels can stimulate this sort of augmented anaerobic metabolism in isolated tissues in the complete absence of added insulin and hypoglycemia can be produced in animals with no circulating insulin.

In contrast, careful studies of glucose kinetics in fasting normal human subjects at the usual low therapeutic doses of about 1 mg/kg have given a completely different picture of the metabolic effects of biguanides^{31,32}. First, there is no evidence of respiratory inhibition at these dose levels; furthermore, in a number of studies glucose conversion to lactate in peripheral tissues is increased significantly; this lactate is transported to the liver where it is rapidly and quantitatively reconverted to glucose. Thus, hepatic gluconeogenesis, rather than being depressed by low-dose biguanide therapy, actually increases. In these non-diabetic subjects the increased rates of peripheral glycolysis and hepatic gluconeogenesis are exactly balanced, a quantitative relationship which explains the well-established fact that biguanides do not lower the blood sugar in normal subjects. There are unfortunately insufficient kinetic studies to pinpoint definitely why the blood sugar does fall in diabetic subjects. A small amount of data exists which suggests that in diabetics the rate of hepatic gluconeogenesis may be prevented from in-

creasing in proportion to the increased rate of peripheral glycolysis³³; hence glucose is prevented from re-entering the blood as fast as it is being removed, and the blood sugar falls.

Some very recent work in animals has re-explored the effects of low doses of biguanides with results that confirm and extend the kinetic studies in humans³⁴. In normal animals these low doses were not associated with significant rises in blood lactate or fall in blood sugar, but glucose conversion to CO₂ was stimulated, exactly as in normal human subjects. In contrast to the effects of high biguanide doses, severely diabetic animals responded very little to low-dose biguanide therapy; when small amounts of insulin were given to the animals however, these small doses of biguanides increased peripheral tissue glucose uptake and accelerated the rate of fall of the blood sugar in a very striking manner. Studies using isolated diaphragm muscles from normal and diabetic animals has entirely confirmed this "insulin-helper" effect of biguanides, particularly in tissues from the diabetics^{34, 35}; the authors have suggested a highly specific site of action for the biguanides within the glycogen synthesizing mechanism.

It is thus apparent that the clinical therapeutic usefulness of biguanides in their usual low therapeutic doses rather than being an insulin-independent phenomenon depends at least partly on their ability to increase the effectiveness of small amounts of insulin in its action on peripheral tissues, particularly muscle, an effect which occurs in the fasting as well as the fed state and almost certainly has nothing to do with respiratory inhibition. However, it is possible that, when large quantities of biguanides accumulate in blood and tissues, as, for example, has occurred in patients who have ingested an overdose of biguanides³⁶, true mitochondrial respiratory inhibition may begin to take place. Rapid accumulation of lactic acid and the clinical syndrome of lactic acidosis, which have occasionally been associated with the use of biguanides³⁷, particularly in azotemic patients³⁸, may be the serious or even fatal result. It is important to emphasize however, that lactic acidosis occurs in the absence of biguanide therapy, and a cause and effect relationship between biguanides and lactic acidosis, although highly suggestive, has been difficult to establish with certainty.

Another dimension of biguanide activity has recently emerged in a somewhat unexpected domain, namely the gastrointestinal tract. This de-

velopment began with the observation that oral glucose tolerance was improved much more than intravenous glucose tolerance in both animals and human subjects. The hypothesis was proposed that biguanides may specifically diminish the rate of glucose transport across the gut wall³⁹. This idea has now been experimentally confirmed in detail⁴⁰. The relevance of this gastrointestinal effect to human biguanide pharmacology is considerable: first, distribution studies have demonstrated that the highest body levels of biguanides exist within the GI tract after either oral or parenteral administration, probably reflecting an enterohepatic circulation⁴¹; and second, most of the minor toxicity of biguanides is related to the gastrointestinal system: bloating, anorexia, nausea, diarrhea and occasionally vomiting. This focus on biguanide-induced glucose malabsorption has brought about renewed interest in the effects of these drugs on the absorption of other substances: vitamin B₁₂ malabsorption of potential clinical importance has now been demonstrated with dimethyl-biguanide⁴², and at least one study has suggested that total calorie malabsorption may account for the moderate weight loss which often accompanies initiation of biguanide therapy⁴³. Indeed, biguanide therapy has proven useful in management of occasional patients with the syndrome of reactive hypoglycemia due to overly rapid absorption of glucose from the upper gastrointestinal tract probably by slowing the rate of glucose absorption⁴⁴.

Efforts are now being made to discern a subcellular action which would provide a unifying explanation for all of these clinical and experimental biguanide effects. Biguanides in solution carry a positive charge, and their interaction with mitochondria⁴⁵, as well as their distribution within the body, appears to depend on their cationic properties. This hypothesis has recently received considerable experimental support from the description of calcium-like activity of a variety of with isolated mitochondria⁴⁶ and in a purified enzymatic system⁴⁷. Since calcium and magnesium ions play critical regulatory roles at the cellular level in carbohydrate, fat, and protein metabolism, it would not be surprising if ultimately it becomes possible to pinpoint actions at specific divalent metal ion sites within specific tissues as the key pharmacologic targets for biguanides.

CLINICAL USES OF ORAL AGENTS

On the basis of the pharmacological and biochemical principles outlined above, rational use of

the sulfonylureas and biguanides would seem to be relatively straightforward. That is, sulfonylureas should be effective in lowering blood sugar in mild to moderate, non-ketosis-prone maturity onset type diabetics; biguanides, for different reasons, should be useful in the same group of patients; and the two types of agents should be more effective in combination than either one alone. All three of these statements appear to be correct, as far as they go. However, a variety of other questions intrude themselves into any discussion

1) Do these agents reverse *all* acute metabolic derangements in diabetics in addition to blood sugar level?

2) Do these drugs actually work better than placebo or diet therapy alone, or in combination?

3) Are these drugs capable of preventing the chronic, degenerative vascular and neuropathic complications of the disease? and

4) Are these agents toxic, acutely or chronically?

Full discussion of all of these points is far beyond the scope of this article. A few comments on each of them may be in order, however.

Concerning the first question, there does appear to be evidence indicating that both sulfonylureas and biguanides favorably affect the elevated free fatty acids, negative nitrogen balance, and inappropriate insulin levels of diabetics^{11, 12, 48-50}.

On the second, at least one large double-blind prospective controlled study⁵¹ has shown that in about one third of patients the initial fall in blood sugar was as great on placebo alone as it was on sulfonylurea therapy; a "good clinical response" of any given patient to sulfonylurea must, therefore, always be viewed with some reservations about the role of the pharmacological agent in that response⁵².

On the third and fourth points major disagreement exists, and there is probably no alternative available to the practicing physician other than his own review of the published evidence, including the results of the cooperative University Group Diabetes Program study^{53, 54} and the recent summaries of critiques⁵⁵ and of defenses⁵⁶.

Perhaps the minimum that can be stated is that the oral agents are still very useful in control of the overt symptoms of the disease: polyuria, polydipsia, moniliasis, malaise, and others. Short-term therapy to this end may be indicated both initially and in periods of transient exacerbation not associated with ketosis or marked catabolism; occa-

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sional patients who cannot or will not take insulin on a long-term basis may be symptomatically improved on chronic oral therapy. However, there exists a growing body of evidence that both classes of agents can and do exert significant pharmacological effects unrelated to their antidiabetic activity in a wide variety of tissues, as well as a growing sense of the vast amount we still do not understand about their actions. It seems appropriate, therefore, to retain a large measure of caution in their long-term use, and of humility concerning the interpretation of any single piece of evidence concerning their pharmacology. Translated into clinical terms, this may mean there is still no substitute to a highly individualized and flexible approach to the therapeutic program for each and every patient, no matter how "routine" his or her disease may appear.

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REFERENCES

- ¹Davidoff FF: Oral hypoglycemic agents and the mechanism of diabetes mellitus. *N Engl J Med* 278:148-55, 18 Jan 68
- ²Watanabe CK: Studies in metabolic changes induced by administration of guanidine bases. I. Influence of injected guanidine hydrochloride upon blood sugar content. *J Biol Chem* 33:253-5, Feb 18
- ³Bischoff F, Shayun M, Long ML: Guanidine structure and hypoglycemia. *J Biol Chem* 81:325-49, Feb 29
- ⁴Shapiro SL, Parrino VA, Freedman L: Hypoglycemic agents. I. Chemical properties of Beta-phenethylguanide. A new hypoglycemic agent. *J Amer Chem Soc* 81:2220-5, 5 May 59
- ⁵Loubatieres A: The hypoglycemic sulfonamides: history and development of the problem from 1942 to 1955. *Ann NY Acad Sci* 71:4-11, 10 Jul 57
- ⁶Feldman JM, Lebovitz HE: Appraisal of the extrapancreatic actions of sulfonylureas. *Arch Intern Med* 123:314-22, Mar 69
- ⁷Fajans SS, Louis LH, Hennes AR, et al: Metabolic effects of sulfonylureas in normal men and in various types of diabetic patients. *Ann NY Acad Sci* 71:207-14, 10 Jul 57
- ⁸Grodsky GM, Bennett LL, Smith D, et al: The effect of tolbutamide and glucose on the timed release of insulin from the isolated perfused pancreas. In Brook Lodge Conference TolbutamideAfter Ten Years. Edited by Butterfield WJH, Van Westering W.. Amsterdam, New York, Excerpta Medica Foundation, 1967. Pp. 11-21
- ⁹Loubatieres A, Mariani MM, Chapal J: Insulin-secretion etudiee sur le pancreas isole et perfuse du rat. I. Synergie entre glucose et sulfamides hypoglycemiants. *Diabetologia*, 6:457-66, Oct 70
- ¹⁰Floyd JC Jr, Fajans SS, Knopf RF, et al: Evidence that insulin release is the mechanism for experimentally induced leucine hypoglycemia in man. *J Clin Invest* 42:1714-19, Nov 63
- ¹¹Reaven G, Dray J: Effect of chlorpropamide on serum glucose and immunoreactive insulin concentrations in patients with maturity-onset diabetes mellitus. *Diabetes* 16:487-92, Jul 67
- ¹²Chu P-C, Conway MJ, Krouse HA et al: The pattern of response of plasma insulin and glucose to meals and fasting during chlorpropamide therapy. *Ann Intern Med* 68:757-69, Apr 68
- ¹³Balodimos MC, Camerini-Davalos RA, Marble A: Nine years' experience with tolbutamide in the treatment of diabetes. *Metabolism* 15:957-70, Nov 66
- ¹⁴Brisson GR, Malaisse-Lagae F, Malaisse WJ: The stimulus-secretion coupling of glucose-induced insulin release. VII. A proposed site of action for adenosine-3', 5'-cyclic monophosphate. *J Clin Invest* 51:232-41, Feb 72
- ¹⁵Malaisse WJ, Malaisse-Lagae F: A possible role for calcium in the stimulus-secretion coupling for glucose-induced insulin secretion. *Acta Diabetol Lat (Suppl)* 7:Suppl 1:2644, Sep 70
- ¹⁶Roth J, Prout TE, Goldfine ID, et al: Sulfonylureas: effects in vivo and in vitro. *Ann Intern Med* 75:607-21, Oct 71
- ¹⁷Levey GS, Schmidt WM, Mintz DH: Activation of adenylyl cyclase in a pancreatic islet cell adenoma by glucagon and tolbutamide. *Metabolism* 21:93-8, Feb 72
- ¹⁸Hellman B, Sehlin J, Taljedal IB: The pancreatic β -cell recognition of insulin secretagogues. II. Site of action of tolbutamide. *Biochem Biophys Res Commun* 45:1384-88, 17 Dec 71
- ¹⁹Arduino, Ferraz FP, Rodrigues J: Antidiuretic action of chlorpropamide in idiopathic diabetes insipidus. *J Clin Endocr* 26:1325-8, Dec 66
- ²⁰Orloff J, Handler J: The role of adenosine 3', 5'-phosphate in the action of antidiuretic hormone. *Am J Med* 42:757-68, May 67
- ²¹Earley LE: Chlorpropamide antidiuresis. *N Engl J Med* 284:103-4, 14 Jan 71
- ²²Ingelfinger JR, Hays RM: Evidence that chlorpropamide and vasopressin share a common site of action. *J Clin Endocr* 29:738-40, May 69
- ²³Weissman PN, Shenkman L, Gregerman RI: Chlorpropamide hyponatremia. Drug-induced inappropriate antidiuretic-hormone activity. *N Engl J Med* 284:65-71, 14 Jan 71
- ²⁴Nielsen RL, Swanson HE, Tanner DS, et al: Effects on blood sugar of a new potent hypoglycemic compound. *Arch Intern Med* 101:211-5, Feb 58
- ²⁵Bodo R, Marks HP: The relation of synthalin to carbohydrate metabolism. *J Physiol* 65:83-99, Mar 28
- ²⁶Soeling HD, Werchau H, Creutzfeldt W: Untersuchungen zur Stoffwechselwirkung von blutzucker-senkenden Biguaniden bei verschiedenen Tier-species, Naunyn-Schmiedeberg Arch Exp Path. 244:290-310, 1963
- ²⁷Hollunger G: Guanidines and oxidative phosphorylations. *Acta Pharm Tox*, 11 (Suppl 1): 1-84, 55
- ²⁸Pressman BC: The effects of guanidine and alkyl-guanidines on the energy transfer reactions of mitochondria. *J Biol Chem* 238:401-9, Jan 63

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Electrocoagulation In The Treatment Of Cancer Of The Rectum

Results Of Procedure Are Comparable To Or Exceed Those Following Adomino-Perineal Resection

By John L. Madden, M.D. and Souhei Kandalaft, M.D.

The elective treatment of cancer of the rectum by electrocoagulation is admittedly a decided departure from the universally accepted practice. Heretofore, with but few exceptions, electrocoagulation was reserved for palliation in the treatment of inoperable rectal cancers.

The purpose of this study is to present the results obtained in the use of electrocoagulation as the preferred method in the treatment of a series of 110 patients with cancers of the rectum.

HISTORICAL SURVEY

Byrne² is oftentimes improperly credited as the first to use electrocoagulation in the treatment of rectal cancer. However, his experience was limited to the use of galvano-cautery in the treatment of uterine cancer. Proper credit is due to the late A. A. Strauss³³ of Chicago, who in 1913 was evidently the first to employ electrocoagulation in the treatment of cancer of the rectum. Initially the method was used for palliation, but as his ex-

perience accumulated it was subsequently employed as the primary treatment of choice.

Following the pioneer and continued efforts of Strauss^{33, 34, 35} the reports of other authors were published sporadically, but the use of electrocoagulation never gained general favor. Percy^{25, 26} was a staunch advocate of the use of the actual cautery in the treatment of cancer of the breast. Later Kiger¹⁶ in 1923 reported on the use of this method in the treatment of rectal cancer. In 1934 the curative potential of electrocoagulation in rectal cancer was stressed by Henschen¹² in Germany and in an excellent study in 1938 by Thorlackson and Hay³⁶ of Canada.

In 1949 Poirier²⁸ of France reported encouraging results of electrocoagulation in a study that was initiated in 1942. His subsequent experience with the use of this method were reported in 1955²⁹ and again in 1969³⁰. In an accumulated experience totalling 134 patients with rectal cancer, 44 were followed from 5 to 25 years. The absolute 5 year "cure rate" was 42.5 per cent. In 1952 Kergin¹⁵ of Canada reported excellent results in 10 of 14 patients in a follow-up which varied

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from a few months to 10 years. Jackman¹⁴ in 1961 reported on an extensive personal experience in the treatment of 153 patients with polypoid cancers of the rectum treated by fulguration only. The follow-up period was from 8 to 18 years, and the success rate exceeded 80 per cent. The method was not used or advised in the treatment of ulcerative cancers.

In 1967¹⁸ and again in 1971¹⁹ our own encouraging results in the treatment of rectal cancer by electrocoagulation as the primary or preferred method were published. More recently Crile and Turnbull⁴ published an excellent study with convincing and confirmatory evidence related to the efficacy of electrocoagulation in the treatment of cancer of the rectum. Twenty-two (68 per cent) of 62 patients treated by electrocoagulation lived 5 years or more compared to 102 (46 per cent) of 220 treated by abdominoperineal resection. The 68 per cent 5 year survival rate is comparable to our own of 74 per cent, as will be subsequently shown.

From the preceding it is apparent that this "new" method has been in use for the past 60 years as a definitive as well as a palliative method of treatment for rectal cancer.

TECHNIC OF FULGURATION

Electrocoagulation is not advised in the treatment of rectal cancers that are more than 10 cm cephalad to the anal orifice. Under such circumstances either an anterior or an abdominoperineal resection is done depending upon the findings at the time of operation. In patients with circumferential lesions an abdominoperineal resection is advised. However, if resection should be contraindicated, electrocoagulation is done for palliation.

In the treatment of cancer of the rectum by electrocoagulation, it is recommended and practiced that all patients be hospitalized. It is not and should not be considered an office procedure. The bowel is prepared by the use of magnesium sulphate, one teaspoonful every 6 hours, and warm soda bicarbonate enemas administered each morning and evening. Bicarbonate is used because it is a mucus solvent and a non-irritant. Antibiotic or chemotherapeutic drugs are not prescribed.

Spinal anesthesia is preferred because of the excellent muscle relaxation obtained and the minimum of postoperative complications. The position of the patient is varied according to the location of the lesion. The prone position is used for lesions of the anterior wall and the lithotomy position when lesions are located on the posterior wall. In

some patients both the prone and lithotomy positions were required to complete the electrocoagulation of the lesion.

The index and middle fingers of the right hand are generously anointed with a lubricant jelly and the anal orifice is dilated gradually to a diameter that would admit five or six fingers. Although there is a variety of operative proctoscopes available for exposure of the lesion, the use of vaginal wall, long Deaver, or narrow Harrington retractors either alone or in combination is preferred. Exposure is the key to success, and the whole of the lesion must be seen. If this is not possible, treatment by electrocoagulation should not be done. In addition to the retractors a fibro-optic head light and a Yankauer tonsil suction apparatus are indispensable. The suction tip removes bowel fluids and particularly the smoke which emanates from the tissue on coagulation.

There are many electrical units available for use, and the choice is dependent upon the surgeon. In our own experience the unit of the Bovie type has proved completely satisfactory. A flat stainless steel or a disposable ground plate* is placed in direct contact with a maximum area of the patient's skin and then connected to the machine. Hairy or scarred areas of skin surface should be avoided. The machine is then activated by turning the main switch knob first to the PAUSE position momentarily and then to the ON position. The current selector knob is set on 2, and the power control knob for coagulation is set at 45 on the dial. The cutting current is not used, and accordingly its knob is set at 0 on its dial. Finally, the pointer of the voltage compensator must always be within the RED section of the meter.

In electrosurgery the smaller the surface contact between the electrode and the tissue, the greater is the heat and the deeper its penetration. Accordingly, a needle point electrode is employed in preference to either the ball point or disc type. The needle point electrode has a lower power setting than the other two, and regardless of the type of electrode used a lower power setting for a longer time will generate a deeper coagulation than will a higher power setting for a shorter interval. Also the needle point electrode is more like the extension of the surgeons finger, since it provides a tactile discriminatory sense that is lacking in the use of the other electrodes.

Initially, the boundaries of the cancer are out-

*Medical Plastics, Inc. (MPi), Minneapolis, Minn.

lined by electrocoagulation of its outer margins. When these margins are raised and rolled, they are electrocoagulated and scraped until the level of the ulcer cancer is reached. The needle point is then inserted into the substance of the tumor, the depth being determined by the resistance felt and the area electrocoagulated. This is repeated in a systematic manner throughout the whole of the tumor area. The tumor surface is then fulgurated and scraped repeatedly until a soft pliable base is noted on digital palpation. Isolated nodules of tumor tissue remaining are readily discernible on palpation and treated as described.

Strauss^{33, 34} favored thorough electrocoagulation of the tumor tissue and advised leaving the coagulum in situ rather than scraping it off. The coagulated surface was allowed to slough off spontaneously, subsequent to which the electrocoagulation was repeated. Strauss^{34, 35} also believed that this method enhanced the production of an autoimmune response with the resulting spontaneous destruction of any existing tumor. However, this belief has not been substantiated by scientific data. Contrariwise, it is our belief that an attempt should be made to destroy the tumor completely at the "first sitting". Accordingly, the tumor is electrocoagulated and scraped until it is grossly destroyed. In scraping the coagulum either a scalpel or a sharp uterine curette may be used, but the curette is preferred.

Active bleeding commonly occurs after the early scrapings of the coagulated surface. However, as destruction of the tumor proceeds, the bleeding lessens and ceases on its completion. After the last coagulation is done an elongated dry gauze sponge is inserted into the rectum and its end is allowed to protrude through the anus. It is removed in 3 hours. The duration of operation for the first treatment may be 2 or even 3 hours depending upon the size and depth of the tumor. Postoperatively general supportive and symptomatic care are given and antibiotics are prescribed on a selective rather than routine basis. The patient is allowed out of bed the evening of the day of operation and return of bowel function is aided by the use of mild catharsis.

How deep to go in the performance of electrocoagulation is a question that is invariably asked. The depth is dependent upon the location of the tumor. In lesions of the posterior and lateral walls the whole thickness of the rectum may be penetrated with exposure of the extrarectal fatty tissue without any ensuing harm. Anteriorly the extent

of electrocoagulation is limited by the posterior vaginal wall, the membranous urethra, and the bladder. In women with anterior wall lesions the posterior vaginal septum may be elevated on the index finger per vaginam better to determine the depth of penetration as the coagulation continues.

In tumors confined to the wall of the rectum destruction is indicated by the appearance of small greyish-white islands which represent the normal muscle layer of the rectum. Their appearance signifies the completion of the electrocoagulation in that area.

Another question that is frequently posed is: How far beyond the borders of the tumor does one go in doing the electrocoagulation? It has been observed repeatedly that once the needle point enters normal tissue there is a "bubbling" of the mucosa. When this is seen, the electrocoagulation is extended for a distance of 1 cm into normal tissue about the circumference of the tumor.

Ten to 12 days after the initial section the operative area is inspected under spinal anesthesia. Varying degrees of tissue slough are seen which is readily removed by electrocoagulation with the needle electrode. When all the slough is removed, careful digital palpation is performed, and areas of questionable residual tumor are biopsied and then treated by electrocoagulation and scraping until a soft pliable base is obtained. The after treatment is the same as previously described, and 6 to 7 days later the patient is discharged from the hospital to return at monthly intervals for 6 months. During one of these visits a small nodular area indicative of possible residual tumor may be detected. Then the patient is again admitted to the hospital, a biopsy is obtained, and the area treated as described for the original tumor. The early recognition of the presence of residual tumor and its immediate destruction by electrocoagulation is most essential to the success of this method of treatment.

It is of primary importance that the patient be informed by the surgeon before treatment is commenced of the possible necessity for one or even more readmissions to the hospital during the first 6 months' follow-up period. When such a mutual understanding exists, tensions are soothed and disappointments abated. If at the end of 6 months the tumor is not eradicated, then abdominoperineal resection is advised.

Failures do occur with electrocoagulation just as with any other method of treatment of cancer

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TABLE I
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1971
AGE AND SEX DISTRIBUTION

Age*	Men	Women	Total	%
20-29	1	0	1	0.9
20-29	1	0	1	0.9
30-39	2	0	2	1.8
40-49	2	1	3	2.7
50-59	11	13	24	21.9
60-69	18	16	34	30.9
70-79	16	18	34	30.9
80-89	8	4	12	10.9
	58	52	110	100.0

(52.7%) (47.3%) (100.0%)

*Youngest — 29 yrs. Oldest — 87 yrs.

Average age — 66.1 yrs.

TABLE II
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1971
DISTANCE FROM ANAL ORIFICE

Distance in Cm.	No. of Patients	%
Anal	7	6.3
2-6	79	71.9
7-10	23	20.9
Not Statd	1	0.9
Total	110	100.0

TABLE III
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1971
SIZE OF TUMOR

Size in Cm.	No. of Patients	%
1-4	75	68.2
5-7	22	20.0
Circumferential	10	9.1
Not Stated	3	2.7
Total	110	100.0

and should be recognized. However, it is believed that the interval of 6 months allotted to the local destruction of the tumor does not have an untoward effect on the course of the disease. Admittedly, however, this belief is purely empirical and does not have a scientific basis in fact. Nevertheless, the performance of an abdominoperineal resection after treatment by electrocoagulation has not been complicated by any undue technical problems.

CLINICAL STUDY

During the 17½ year period between February 1954 and August 1971, cancers of the rectum in 110 patients were treated by electrocoagulation. The age and sex distribution are shown in Table I.

In seven (6.3 per cent) patients the lesion was located in the anus (Table II). In three of the

TABLE IV
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1971
NUMBER OF FULGURATION SESSIONS*

Fulgurations	Patients	%
1	15	13.7
2-4	64	58.3
5-7	23	20.9
8-13	8	7.1
Total	110	100.0

*Average: 4 sessions per patient.

TABLE V
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1971
COMPLICATIONS IN 110 PATIENTS

	Number	%
Bleeding*	23	20.9
Perforation	2	1.8
Rectovagina l fistula	2	1.8
Pulmonary embolus	1	0.9
	28	25.4

*Stopped spontaneously — 13 (56.6%)

Operation required — 10 (43.4%)

Blood transfusion — 10 (43.4%)

Recurrent bleeding — 5 (21.7%)

seven patients the histopathologic diagnosis was squamous cell cancer and in the remaining four adenocarcinoma. In 79 (71.9 per cent) patients the tumor was located between 2 and 10 cm from the anal orifice. In one (0.9 per cent) patient the distance of the tumor was not stated. Lesions higher than 10 cm are not amenable to treatment by electrocoagulation and are treated by anterior resection or by abdominoperineal resection.

The size of the tumor was varied (Table III). In 75 (68.2 per cent patients it ranged between 1 and 4 cm and in 22 (20.0 per cent) between 5 and 7 cm. In 10 (9.1 per cent) patients the lesions were circumferential, and in the remaining three (2.7 per cent) the size was not recorded.

The number of fulguration sessions varied between one and 13, the average being four sessions for each patient (Table IV). One session sufficed in only 15 (13.7 per cent) patients. Most of the patients, 64 (58.3 per cent), had two to four sessions. In 23 (20.9 per cent) patients five to seven sessions were required, and in eight (7.1 per cent) the number varied between eight and 13.

The duration of the initial electrocoagulation session varied from 40 minutes to 3 hours, with an average duration of 1 hour and 20 minutes. Subsequent sessions were shorter, the duration being dependent upon the extent of the lesion.

Twenty-eight (25.4 per cent) of the 110 patients had complications (Table V). The most

frequent was bleeding which occurred in 23 (20.9 per cent) patients. In 13 (56.6 per cent) the bleeding stopped spontaneously, whereas in 10 (43.4 per cent) operative hemostasis was required. In nine patients this was accomplished by electrocoagulation and in the remaining patient by suture ligation. Blood transfusions of one to four units were necessary in 10 (43.4 per cent) of the 23 patients and five had repeat episodes of bleeding.

Perforation into the peritoneal cavity was a complication in two (1.8 per cent) patients. One was treated by immediate suture closure and complementary transverse colon colostomy, the other by definitive abdominoendorectal excision with terminal sigmoid colostomy.

Rectovaginal fistulas occurred in two (1.8 per cent) patients. One patient had an inoperable squamous cell tumor of the anus which extended deeply into the right buttock to form a huge phlegmon. Electrocoagulation was used as the most desirable form of palliation combined with a sigmoid loop colostomy in continuity. The patient survived a surprising duration of 44 months before dying of disease. In the second patient, alive and well 5 years post fulguration, there is a fistula 3 mm in size which is asymptomatic.

One (0.9 per cent) patient had a non-fatal pulmonary embolus secondary to a deep venous thrombosis in the left lower extremity. A thrombectomy of the left superficial femoral vein was performed followed by closure of the phlebotomy incision without ligation of the vein.

FOLLOW-UP STUDY

The over-all follow-up study, including both the operable and inoperable patients, is shown in Table VI. Sixty (54.6 per cent), or over half of the patients, are alive and well without evident disease for an average duration of 4.2 years. Of the 17 (15.4 per cent) patients who died of other causes, and whose average duration of survival was 2.7 years, only 3 (17.6 per cent) had disease present.

For a comparative follow-up the patients were separated into two groups: operable and inoperable (Table VII). The average ages of the patients in the two groups were 63.5 years and 72.4 years respectively. The patients in the operable group were those who were considered ideal candidates in every way for treatment by abdominoperineal resection but in whom electrocoagulation was used as the primary and preferred method of treatment. The inoperable group comprised those patients in whom there were one or more of the generally

TABLE VI
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
OVER-ALL FOLLOW-UP STUDY

	No.	%	Duration (Yrs.)	Average (Yrs.)
Alive and Well	60	54.6	1-18	4.2
Alive with Disease	11	10.0	1.6- 6.2	3.0
Dead of Disease	22	20.0	0.5- 9	2.9
Dead of Other Causes	17*	15.4	0.2-13	2.7
Total	110	100.0		

*Disease Present 3 pts. (17.6%)

TABLE VII
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
RESULTS IN RELATION TO OPERABILITY

	No. of Pts.	Alive and Well	Alive with Disease	Dead of Disease	Dead of Other Causes
Operable	77	50 (64.9%)	8 (10.4%)	11 (14.3%)	8* (10.4%)
Inoperable	33	10 (30.3%)	3 (9.0%)	1 (33.3%)	9** (27.4%)
Total	110	60 (54.6%)	11 (10.0%)	22 (20.0%)	17 (15.4%)

*No disease present.

**Disease present — 3 pts. (33.3%)

Aver. Age: Oper. 63.5 yrs.; Inoper. 72.4 yrs.

TABLE VIII
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
RESULTS IN RELATION TO OPERABILITY

	No. of Pts.	Alive and Well	Follow-up in Mos.
Operable	77	50* (64.9%)	61.3
Inoperable	33	10 (30.3%)	73.6
	110	60 (54.5%)	

*A.P. Resection - 1 pt. (2.0%). Age 78 yrs.

Corrected percentage — 63.7%

TABLE IX
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
FAILURE RATES

	No. of Pts.	Failures	%
Operable	77	20	25.9
Inoperable	33	17	51.5
	110	37	33.6

(Continued on next page)

TABLE X
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972

110 PATIENTS A.P. RESECTION AFTER FAILURE OF ELECTROCOAGULATION					
No. of Pts.	Alive and Well	Alive with Disease	Died of Disease	Died of Other Causes	P.O. Deaths
11* (10.0%)	1 (9.1%)	2 (18.1%)	6 (54.5%)	1 (9.1%)	1** (9.1%)
*Dukes B -- 6 pts. (54.5%). Dukes C - 5 pts. (45.5%). Liver metastases - 1 pt. (9.1%), 21 mos. post fulg. **83-year old woman - 5 days p.o. Clostridium infection.					

TABLE XI
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
RELATION OF TYPE OF TUMOR
TO SURVIVAL

Type of Tumor	No. Pts.	Alive and Well	%	Aver. Surv. Mos.
Villous Adenoma, Malignant	15 (13.6%)	12	80.0	36.5
Polypoid	48 (43.7%)	33	68.8	54.8
Squamous Cell	3 (2.7%)	1	33.3	65.0
Ulcerative	37 (33.7%)	14	37.8	52.4
Encircling	7 (6.3%)	0	0.0	0.0
Total	110	60 (54.6%)		

TABLE XII
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
OVER-ALL FOLLOW-UP STUDY

	No. Pts	%	<1 Year	1-2 Years	2-5 Years	5-10 Years	>10 Years
Alive	71*	64.6	0	18	25	26	2
Dead	39**	35.4	10	11	14	3	1
Total	110	100.0	10	29	39	29	3
*53 pts (74.6%) followed > 2 yrs.; 28 pts. (39.4%) > 5 yrs. Aver. duration of follow-up - 4 yrs. **22 pts. (56.4%) died of disease. Aver. Surv. 30.1 mos.							

accepted contraindications to an abdominoperineal resection. These included senility; advanced age; blindness; incapacitating cardiovascular, hepatorenal and pulmonary diseases; distant metastases; fixation of the tumor; and completely en-

circling lesions. However, it did not include patients who adamantly refused the performance of an abdominoperineal resection despite the presence of a resectable lesion. Instead, such patients were put into the operable group.

The results of electrocoagulation in relation to operability of the rectal cancer are depicted in Table VII. In the operable group of patients those in whom abdominoperineal resection is the generally accepted procedure 50 (64.9 per cent), or about two of every three patients, are alive and well for an average duration of 5 years and one month. One (2.0 per cent) of the 50 patients had a subsequent abdominoperineal resection performed and is alive and well 18 months after operation. Accordingly 49 (63.7 per cent) of the 77 patients with operable lesions are alive and well after electrocoagulation alone (Table VIII). Furthermore, of the eight (10.4 per cent) patients in the group who died of other causes none had disease present, and four survived more than five years.

In contrast to the operable group of patients, the results in the patients who comprised the inoperable group were, as anticipated, not so satisfactory. However, it must be emphasized that these patients, most of whom were referred specifically for palliative treatment, were precarious risks, and little in the way of definitive treatment could be proposed to them. Even so, 10 (30.3 per cent) are alive and well for an average duration of 6 years and one month. Furthermore, six (66.6 per cent) of the nine patients who died of other causes had no disease present. One of these six patients, a man who died at the age of 89 years, was more than 5 years post-electrocoagulation.

Of the total of 110 patients 37 were classified as failures. This represents an over-all absolute failure rate of 33.6 per cent (Table IX). When the patients are separated into operable and inoperable groups, the failure rates are 25.9 per cent and 51.5 per cent respectively. In the operable group the 20 failures comprised 11 patients who died of disease; 7 patients who died of disease after abdominoperineal resection, one patient alive with disease after abdominoperineal resection, and one patient who is alive and well 18 months after abdominoperineal resection. In the inoperable group, although the failure rate was expectedly high, the salvage rate of 49.5 per cent was an unexpected high yield for a group of patients in whom therapy was indeed limited.

In the total of 37 (33.6 per cent) patients who were classified as failures, there were five (13.3

TABLE XIII
ELECTROCOAGULATION IN THE TREATMENT
OF CANCER OF THE RECTUM
FEB. 1954 - AUG. 1972
FOLLOW-UP STUDY: 5-18 YEARS

No. of pts	Alive and well	Alive with Disease	Dead of Disease	Dead of other Causes
Operable				
35*	21****	2	8	4
(63.6%)	(60.0%)	(5.8%)	(22.8%)	(11.4%)
Inoperable				
20**	4	1	8	7
(36.4%)	(20.0%)	(5.0%)	(40.0%)	(35.0%)
Total				
55***	25	3	16	11
(100.0%)	(45.5%)	(5.4%)	(29.1%)	(20.0%)
*26 (74.3%) pts. lived > 5 years.				
** 6 (30.0%) pts. lived > 5 years.				
***32 (58.1%) pts. lived > 5 years.				
****Aver. duration - 7 yrs. Aver. age - 57.1 yrs.				

TABLE XIV
CANCER OF THE RECTUM
LOWER 10 CM.
5-YEAR SURVIVAL RATES

Author	Year	Nodes —	Nodes +	Over-all %
Waugh	1949	72.2	24.2	49.4
Gilbertsen	1960	77.0	23.0	52.0
Grinnell	1953	65.4	34.6	53.4
Stearns	1971	76.3	34.0	53.4
Lloyd-Davies	1969	65.5	34.5	54.8
Aver.		72.0	28.0	52.6
Electrocoagulation - 35 pts. - Oper. Lesion				
5-yr. Survival Rate				
Without Recurrence				
				74.3
				60.0

per cent) who had true recurrences after being apparently free of disease for 12 to 78 months the average interval being 38.4 months. The remaining 32 patients who were failures had residual disease at each follow-up examination.

A total of 11 (10.0 per cent) of the 110 patients had subsequent abdominoperineal resections performed (Table X). In six (54.5 per cent) patients the lesion was classified as a Dukes B and in the remaining 5 (45.5 per cent) Dukes C. Only one (9.1 per cent) of the 11 patients is alive and well 18 months after operation. One patient, an 85-year old woman from the inoperable group, died five days after operation from a fulminating Clostridium infection of the perineal wound. The other 10 patients, all of whom survived the operation, were from the operable group.

The relation of the morphologic characteristics of the tumor to its incidence and patient survival rates is shown in Table XI. The best prognosis

TABLE XV
CANCER OF THE RECTUM
LOWER 10 CM.
ABDOMINOPERINEAL RESECTION
MORTALITY RATES

Author	Year	No. of Pts.	Mortality %
Bacon	1967	585	2.4
Mayo	1951	689	4.1
Colcock	1958	300	4.6
Hughes	1963	391	5.4
Lloyd-Davies	1957	1090	8.5
Grinnell	1953	366	16.9
Ottenheimer	1955	2461	17.8
Total		5882	8.4
Electrocoagulation		110	0.0

TABLE XVI
CANCER OF THE RECTUM
LOWER 10 CM.
INCIDENCE OF LYMPH NODE METASTASIS

	Year	No. of Pts.	Nodes +	%
Waugh	1949	301	140	46.6
Grinnell	1953	245	104	42.4
Mayo	1956	569	261	45.8
Gilbertsen	1949	301	140	46.6
Morson	1963	1592	762	47.9
Gabriel	1969	1211	625	51.6
Stearns	1971	206	84	40.7
Total		4374	2074	47.4

was in the patients with malignant villous adenomas and malignant polypoid tumors which were considered as separate entities rather than together under the one heading of polypoid tumors. Two (13.3 per cent) of the 15 patients with malignant villous adenomas died. One patient had a completely encircling lesion and died of disease 31 months after electrocoagulation. The other, an 82-year old woman, died 18 months later of unrelated disease. Patients with encircling lesions had the worst prognosis. In the treatment of such lesions abdominoperineal resection is advised. Electrocoagulation should be used as palliation only in those patients in whom resection is contraindicated.

The over-all follow-up study according to years of survival is shown in Table XII. Fifty-three (74.6 per cent) of the 71 patients who are alive, or three in every four, have been followed more than 2 years, and 28 (39.4 per cent) have been followed more than 5 years. The average duration of follow-up in the 71 living patients is 4 years.

The absolute 5-year survival rates are shown

(Continued on next page)

in Table XIII. In the operable group thirty-five (45.4 per cent) of the total of 77 patients were available for study. Twenty-six (74.3%) or three in four, lived more than 5 years, and three (11.5 per cent) had recurrent disease. Twenty-one, or approximately two in three (60 per cent), were alive and well without recurrence for an average survival of 7 years.

Twenty (60.6 per cent) of the 33 patients in the inoperable group were available for study, and six (30 per cent) had lived more than 5 years without recurrence of disease. When both the operable and inoperable groups are considered as a whole, 32 (58.1 per cent) patients, or almost 60 per cent, lived more than 5 years without recurrence.

These data, though limited, would seem to indicate that the results of electrocoagulation are at least equal to and in many respects superior to abdominoperineal resection in the treatment of cancer of the rectum.

DISCUSSION

Electrocoagulation by definition⁵ is "coagulation by means of a biterminal high frequency electric current." Fulguration is defined as "destruction of animal tissue by electric sparks whose action is controlled by a movable electrode." Essentially they differ only in degree, fulguration having the more destructive effect of heat. Accordingly, it is associated with more extensive tissue necrosis. However, in this presentation both terms are used interchangeably.

Electrocoagulation and fulguration are both forms of surgical diathermy. Diathermy (Greek: *dia* — through or across, and *therme* — heat) is literally a "heating through" of the tissues by the application of electric currents. It differs from the cautery in that the patient must be "grounded" and also in the diffusion through the tissues of the heat that is generated. In the use of the cautery the heat is localized to the surface of the tumor that is being destroyed and is less both in intensity and diffusion. Accordingly, diathermy is the preferred method.

Admittedly, the primary and definitive treatment of cancer of the rectum by electrocoagulation is a radical departure from the universally accepted method of abdominoperineal resection. Therefore, with rare exceptions it has been used purely as a palliative procedure in patients who either refused operation or were considered inoperable.

In our experience the definitive treatment of cancer of the rectum by electrocoagulation was used for the first time in 1954 and this purely by

chance. An abdominoperineal resection was advised but steadfastly refused. The patient died 13 years later at the age of 73 from a proved acute myocardial infarction. During the ensuing 5-year period between 1954 and 1959, electrocoagulation was used selectively in only three other patients and in each the result was excellent.

In 1959 a 52-year-old woman was seen with a cancer of the posterior wall of the rectum which measured 2x2x1 cm in size and was located 4 cm from the anal orifice. The patient was in excellent physical condition and an extended "curative" operation was done. The distal transverse colon was used to establish a terminal colostomy and a left hemicolectomy combined with aortocaval node dissection, pelvic lymphadenectomy and abdominoperineal resection in one stage was carried out. The histopathologic diagnosis of the lesion was Dukes A. However, the patient died 14 months later of disseminated peritoneal metastases. Subsequent to this experience and beginning in 1960, electrocoagulation was used as the preferred method in the treatment of operable cancer of the rectum.

The historical development of surgery in the treatment of cancer of the rectum culminated in the establishment of the radical one-stage abdominoperineal resection of Miles as the primary procedure of choice. However, the results of this operation, even amongst the most skilled and experienced surgeons, terminate in an overall 5-year survival rate that varies between 49.4 per cent and 54.8 per cent (Table XIV). Furthermore, there is an associated mortality rate that approximates 5 per cent (Table XV). However, when the operation is performed by a variety of staff surgeons representing a large general hospital as reported by Grinnell or in a multiplicity of smaller community hospitals as presented by Ottenheimer²⁴ the mortality rates are approximately 17 per cent (Table XV). It is believed that 12 per cent would be a fair estimate for the average mortality rate throughout the United States. In comparison there were no deaths in the 110 patients, both operable and inoperable, in whom the tumor was treated by electrocoagulation.

Following abdominoperineal resection there is a high complication rate, particularly related to bladder and sexual dysfunction. Furthermore, these are frequently of long standing and are mentally disturbing. Colcock³, in a series of 300 patients, reported a complication rate of 58.3 per cent. Each

(Continued on page 429)

Double Contrast Arthrography Of The Knee - A Report Of 135 Consecutive Studies At Rhode Island Hospital

Method Is A Useful And Accurate Aid In The Diagnosis Of Torn Or Degenerative Medial Meniscus

By A. A. Savastano, M.D., Paul E. Poirier, M.D.,
and Joseph A. Izzi, M.D.

Frequently the orthopedic surgeon is faced with a typical knee problem in which he is left in doubt as to whether there is a meniscal lesion, torn cruciate ligament, or articular cartilage damage. It is the purpose of this report to present 135 knee arthrogram studies done at Rhode Island Hospital between December 1970 and January 1972 to illustrate the relative facility and advantage of such study..

HISTORICAL REVIEW

Arthrography of the knee to delineate its soft tissue structures is not a new concept. It was first demonstrated in 1905 at the fourth German Orthopedic Meeting by Wernerdorff and Robinson. Their technique utilized the injection of air as a contrast medium, but since on several occasions patients expired from air emboli this method was discontinued. In 1906 Hoffa and Ravenbusch published a paper on knee arthrography using pure oxygen. No further contributions were made until 1930, when two Swiss surgeons, Bircher and Ober-

holzer, began their work with double contrast studies using iodinated contrast media. In the next few years a search for an innocuous contrast medium was undertaken. Several iodinated contrast media were tried, including abrodil® in 1931 and Lipiodol® in 1932. These proved to be irritating to the Synovium, but were not discontinued until the advent of double contrast study technique. Meschan and McGaw in 1947 reported 315 operative cases using air as a contrast medium. In 1951 GBeist reported the use of 35 per cent Diatrast® in 22 cases with no ill effects. Fluoroscopy, using air contrast, first used by Niddecher in 1953, proved to be a better technique of visualizing the inner structures of the knee. He called his method "Aimed Pneumoarthrography". Turner and Wurtz in 1959 reviewed 469 cases of arthrography, using 10 to 15 ml of 35 per cent Diatrast®. They reported an accuracy of 72 to 90 per cent in detecting cartilage abnormalities in the medial meniscus. In 1960 Zahressen in Sweden used 8 to 10 ml of Umbradil® with 20 to 25 ml of air, and Heiser in 1962 reported the use of 8 to 10 ml of 50 per cent Hypaque®.

Within the past 10 years several techniques and contrast media have been used throughout the world. It is not within the scope of this paper to include an extensive review of the literature. In our study we have used a combination of tech-

(Continued on next page)

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niques introduced by several researchers applying Renographin-60® as the contrast medium mixed with 10 ml of air and 40 ml of carbon dioxide. The entire study was carried out under fluoroscopic control better to position and visualize the inner structures of the knee.

INDICATIONS

Double contrast arthrography of the knee has been found useful to evaluate all unclear knee symptoms, especially when the subjective symptoms far outweigh the objective findings. It is useful also in evaluating the postmeniscectomy patient when symptoms persist or in documentation of disability evaluation. It is further useful in fresh ligamentous tears when there is difficulty in localizing the meniscal lesion whether in the medial or lateral meniscus. Arthrography also has proved useful in delineating the cruciate ligaments, the inferior border of the patella to demonstrate chondromalacie, foreign bodies, and Baker's cysts.

EQUIPMENT

1. Razor for skin preparation
2. Sponge and sterile drapes
3. Kelly clamp
4. Solutions for skin preparation
5. Syringes of various sizes
6. Hypodermic needles of various sizes
7. 1 per cent xylocaine®
8. Renographin-60®
9. Carbon Dioxide
10. ACE® elastic bandage
11. Fluoroscope

TECHNIQUE

The patient is examined in both the supine and sitting positions. The knee is prepared by shaving excessive hair and applying Betadine® solution under strict aseptic conditions. The knee is draped with sterile drapes, and the knee joint is approached from the superior-lateral aspect of the patella using 1 per cent xylocaine® to anesthetize the skin and subcutaneous tissues. An 18-gauge needle is then inserted into the knee joint, and any effusion is evacuated completely. Under fluoroscopic control, 5 to 7 ml of Renographin-60® are injected. It is often difficult to ascertain whether the joint space has been entered when no effusion is present. The dispersion of the contrast medium under fluoroscopic control is readily recognized. Following the injection of the contrast medium, approximately 10 ml of room air is injected into the knee, followed by 40 ml of carbon dioxide. This distends the joint better to visualize the soft

structures. The knee is then flexed and extended for approximately two minutes to be certain that the inner structures are coated with the contrast material. Following this manipulation, a 4-inch ACE® elastic bandage is snugly applied over the suprapatella pouch to force the gases into the knee joint and distend it for better visualization and the patient is permitted to ambulate for approximately five minutes further to insure the coating of all the structures.

The patient is then placed on the fluoroscopic table in the supine position with an assistant, usually the orthopedic surgeon, controlling the lower extremity. Pressure is applied first to the lateral aspect of the joint forcibly to open the joint space medially. Spot films are taken under fluoroscopic control to be certain that the X-ray beam is aimed directly into the joint space and to prevent overlapping of bones. Several views are obtained, first, in the antero-posterior position, rotating the leg internally until lateral views are taken for posterior horn views. The same procedure is then carried out for the lateral side of the knee. Next the patient is turned to the prone position, and several exposures are taken in the posteranterior position. All X-ray films are reviewed prior to removal of the ACE® bandages in case any further views are needed. At this point the ACE® bandage is released, and cross table anteroposterior and lateral exposures of the knee are taken with the knee in slight flexion and with an assistant manipulating the knee to demonstrate a possible anterior draw sign. This better visualizes the cruciate ligament. It is also in this cross table lateral view that the under surface of the patella is best visualized.

INTERPRETATION

In the X-ray films there are definite localizing signs in the interpretation of the areas of the menisci (see figures 1 to 5). In the medial meniscus the anterior horn has a relatively small meniscus with a side superior capsular space and a convex tibial plateau. The patella is also visible. The middle zone has a relatively small meniscus with a narrow superior capsular space, and the tibial plateau is flat. The posterior horn has a broad meniscus with a very narrow superior capsular space and a concave tibial plateau. The lateral meniscus on the other hand has a broad meniscus in the anterior horn and a broad superior capsular space. The patellar border is also visible. The middle zone of the lateral meniscus has a high



Fig. 1

Arrow points to normal medial meniscus delineated by double contrast arthrography. Notice the sharp triangular edges of the meniscus in cross section.



Fig. 2

Arrow points to the torn medial meniscus. Notice how the dye has seeped into a longitudinal tear disrupting the normal triangular configuration.



Fig. 3

Photograph of the same meniscus seen in the arthrogram in Fig. 2.

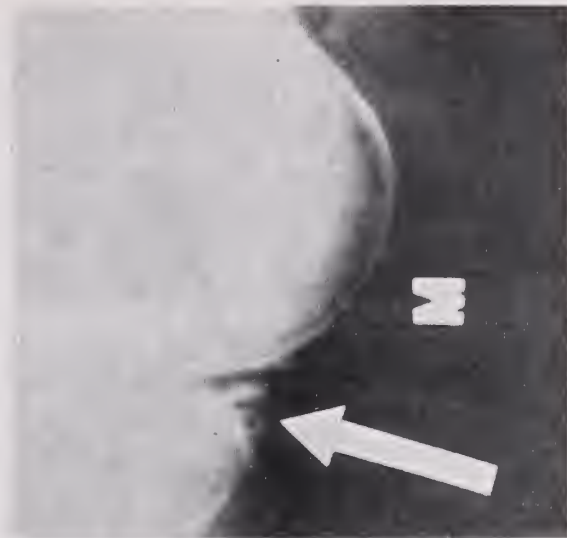


Fig. 4

Arrow points to medial meniscus with several "bucket handle" tears.



Fig. 5

Photograph of the meniscus seen in the arthrogram in Fig. 4.

meniscus with a narrow superior capsular space, and an inferior recess is visible. The posterior horn of the lateral meniscus has a broad meniscus with a very narrow superior capsular recess and a large inferior recess. The hiatus popliteus is also visible as is the head of the fibula. In the interpretation of a normal meniscus one expects to see the very sharp edges in the triangular cross section of the meniscus with the height being less than the width throughout. The medial meniscus should also be adherent to the medial collateral ligament throughout its midzone portion. The lateral meniscus on the other hand presents a more difficult interpretation because of the pres-

(Continued on next page)

ence of the popliteus tendon. The contrast medium tends to coat the popliteus tendon as well as the other structures and obscures the total visualization of the lateral meniscus for tears. In our study we have refrained from making any definite diagnosis of lateral meniscal tears because of this. Abnormal interial menisci on the other hand readily demonstrate tears either inferiorly, horizontally, or vertically throughout any portion of the three previously mentioned zones. In addition, degenerated menisci can be interpreted by rounding of the sharp triangular borders and when the width of the meniscus is less than its height at any zone. In addition to meniscal problems, the cruciate ligaments can also be visualized and interpreted as to extreme narrowing or complete obliteration. Not infrequently an unsuspected Baker's cyst is visualized by arthrography.

RESULTS OF STUDY

One hundred and thirty-five consecutive arthrograms were reviewed. All surgically treated patients were followed by correspondence with their attending physicians. The arthrograms were classified as either positive or negative for medial meniscal tears. Of the 135 cases studied, 57 were interpreted as positive and 78 as negative. Of the 57 cases with positive studies, 38 eventually were operated upon; and in each case the operative findings were in accord with the preoperative radiologic interpretation. Of the 78 cases with negative interpretations, 15 eventually were operated upon; in two of these cases a torn medial meniscus was found. Also among the 15 cases with negative reports in which operation was performed, there were 10 cases of degenerative menisci without tears and three of normal menisci. In our study the correlation of positive interpretations to the surgical findings was 100 per cent. Of the 15 negative interpretations, 13 were confirmed for a correlation of 86.6 per cent. For all 53 operative cases, the correlation was 96 per cent.

CONCLUSIONS

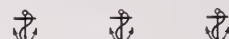
In reviewing this series it became evident that the later studies were more accurate than the earlier. This is explained by improved experience in both the technical aspects and in interpreting the X-rays. There were no cases of infection secondary to arthrography, and morbidity was negligible. The procedure is carried out on an ambulatory basis. Patients are warned that they will feel a bubbling sensation within the knee joint

for several hours after the arthrogram is completed. This sensation resolves with the absorption of the gases and contrast medium. The procedure is a useful and accurate aid in establishing the diagnosis of torn or degenerative medial menisci. However, arthrography may be misleading in the diagnosis of lateral meniscal lesions. Greater experience in interpretation of this condition may improve the results.

REFERENCES

- ¹Heiser S, LaBriola JH, Meyers MH: Arthrography of the knee. *Radiology* 78:822-8, Nov 62
- ²Kelikian H, Lewis EK: Arthrograms. *Radiology* 52:465-87, Apr 49
- ³Liljedahl SO, Lindvall N, Wetterfors J: Roentgen diagnosis of rupture of anterior cruciate ligament. *Acta Radiol (Diagn)* 4:225-39, May 66
- ⁴Meschan I, McGraw WH: Newer methods of pneumarthrography of the knee with an evaluation of the procedure in 315 operated cases. *Radiology* 49:675-711, Dec 49
- ⁵Nidecker HJ: Die gezielte Pneumarthrographie des Kniegelenkes. *Radiol Clin, Basel* 22:10-28, Jan 53
- ⁶Ricklin P, Ruettimann A, Del Buono MS: *Meniscus Lesions*. New York and London, Grune & Stratton, 1971
- ⁷Sachs M, McGraw WH, Rizzo RP: Studies in the scope of pneumarthrography of the knee as a diagnostic aid. *Radiology* 54:10-32, Jan 50
- ⁸Turner VC, Wurtz FB: Arthrography in the diagnosis of meniscal injuries of the knee: A correlation of the roentgenographic, clinical, and operative findings. *J Bone Joint Surg* 14A:1213-20, Oct 59
- ⁹Zakrisson U: Meniscography by van de Berg's double contrast technique. *Acta Radiol* 53:442-7, June 60

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ONE SENTENCE ESSAY

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Editorials

LIGHT EMITTING DIODES

These remarkable little devices, known familiarly as LEDs, in the short time that they have been available have wrought a minor technological revolution. The story of LEDs goes back to 1907 when one H. J. Round found that he could produce flashes of yellow light by making contact between some battery wires and a crystal of silicon carbide. This observation lay dormant until the 1950s when it was discovered that the semiconductors silicon and germanium could be made to emit infra-red light by controlled agitation of their electrons. It was not until 1962 that LEDs capable of emitting light in the visible spectrum were produced. This opened the door to a wide range of developments. Current commercially available diodes make use of semi-conductor compounds of the element gallium.

LEDs are outmoding hands on watches and clocks, are replacing tiny incandescent lamps as indicator lights, and have made practical the pocket calculator which is the size of a small transistor radio. The numbers formed by diodes in bright red lights may be quite legible in sizes as

small as one-eighth inch. An arrangement of seven diodes provides an illuminated display of every digit from zero to nine. The diodes, placed in a figure-of-eight configuration, are embedded in an epoxy plastic lens.

By varying materials lights of other colors may be produced, yellow and green showing increasing popularity. LEDs respond many times faster than incandescent lamps and are sturdier and less fragile, more shock resistant, and longer lasting. Their half-life in light output is an amazing 100,000 hours.

In addition to their great usefulness in the laboratory and in computers, they are emerging as increasingly popular in the consumer world of pocket calculators and digital watches. One such watch, with a quartz crystal for time control, is accurate to within 60 seconds a year. The time in digits lights up upon pressing a button.

This new technological mini-miracle will undoubtedly appear increasingly in medical usage both in the laboratory and in clinical equipment.

PROVIDENCIA STUARTII

The growing importance of the organism *Providencia stuartii* as a cause of burn sepsis should be of especial interest to Rhode Islanders. The late eminent Professor Charles A. Stuart of Brown University, a bacteriologist and immunologist of international reputation, made major contributions to the understanding of salmonella and other enteric gram negative organisms. This unfamiliar organism, which he first described, bears not only his name but the name of the city where he lived and worked most of his years. It is a gram negative rod, a member of the enterobacteriaceae family which embraces also escherichia, proteus, salmonella, serratia, and others.

Effective antibiotic treatment of burns resulted in the control of streptococcus and staphylococcus sepsis, but was followed in the early 1960s by the emergence of *Pseudomonas aeruginosa* as a leading culprit in burn infection and death from burn sepsis. Modern burn treatment by topical applications of Sufamylon® or other preparations and by systemic antibiotic administration resulted in a

substantial improvement in burn morbidity and mortality..

A retrospective study by Curreri, et al. from the Brooke Army Medical Center shows a surprising increase in the presence of this unfamiliar organism in burn cultures. As of 1970 they found that the incidence of *Providencia stuartii* bacteremia was almost twice that of *Pseudomonas aeruginosa* and appeared to be increasing. There has also been a marked rise in incidence of positive sputum cultures of this organism in burned patients, associated with an apparent increase in pulmonary deaths.

Its identification depends upon rather elaborate biochemical testing in several different media, so that it is often reported merely as enterobacter or paracolon group without specific identification, with the result that it is frequently missed. Its frequency in the hospital environment throughout the United States appears to be increasing. Systemic invasion is thought to be primarily by way

(Continued on next page)

of the respiratory tract. It has been isolated in blood, sputum, urine, and burn wound cultures from thermally injured patients.

The organism is relatively resistant to antibiotics as evidenced by the fact that only 12 per cent of isolated strains were sensitive to the two most effective antibiotics.

The study reveals in a large burned population the emergence of a highly lethal and relatively

resistant organism, which has hitherto remained largely unrecognized. Its incidence is probably widespread. Professor Stuart would surely have faced this new intelligence about *Providencia stuartii* with mixed emotions.

REFERENCE

Curreri PW et al: *Providencia Stuartii*
Sepsis: A new challenge in the treatment of burns.
Ann Surg 177:133-8, Feb 1973



...ERRATA...

In the article "Drug Disposition in the Fetus and Newborn Infant," by Summer J. Yaffe, M.D., published in the July, 1973 issue of the Journal (Vol. 56, No. 7), the legends to Fig. 1 and 2 on pages 281 and 282 were transposed. The acknowledgement at the end of the paper should be the research grant HD06611. The Editors regret these errors.

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are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain¹⁻³ leading to this conclusion, and one⁴ in the United States. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as non-users. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of

fluid retention, conditions which might be influenced by this factor such as epilepsy, migraine, asthma, cardiac or renal dysfunction require careful observation. In breakthrough bleeding, and in cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vagina adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. A possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised that Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast change (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately postpartum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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ELECTROCOAGULATION IN THE TREATMENT OF CANCER

(Continued from page 422)

of the 14 deaths (4.6 per cent) was related to one or more of the complications that ensued. The complications following electrocoagulation were much less frequent (25.4 per cent) and not of the same order of magnitude (Table V).

In the treatment of cancer of any organ an established tenet of good surgical treatment is the removal of the primary lesion and its lymphatic drainage. The logical corollary of this tenet was the extension of operation on the basis that, if a "wide excision" was good, a "wider excision" would be better. Earlier we were in complete accord with this concept as indicated in previously published reports. However, as experience accumulated, the higher complication and mortality rates in conjunction with the absence of improvement in long term survival rates did not justify its continued use. This conclusion is supported by the results reported in the excellent study of Ferguson⁶. In this regard one must never lose sight of the fact that the surgical treatment of cancer has always been and forever will be a "macroscopic

attack on a microscopic disease." As such it can never prove the ultimate in cancer therapy. However, despite this fact, it has proved "curative" in many patients. Furthermore, in our present state of knowledge it is believed to be the best method of treatment and frequently the only one available.

The prognosis for cancer in any region is related to the presence or absence of metastases to the regional lymph nodes. The primary objection to the treatment of cancer of the rectum by electrocoagulation is the lack of knowledge to the presence or absence of metastases in the regional lymph nodes. Admittedly this is a valid objection, and in rebuttal the logical answer would be to subject each patient to abdominal exploration to determine the extent of the disease before initiation of treatment by electrocoagulation. However, this determination may frequently prove difficult, and the necessity for abdominal exploration would detract from the simplicity of the operation as presently performed.

In cancer of the rectum the incidence of lymph node metastases in resected surgical specimens that were screened carefully varied from approximately

(Continued on next page)



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40.0 per cent to about 50 per cent with an average incidence of 47 per cent (Table XVI). Reasoning a priori from these data, it may be assumed that one of every two patients with operable cancer of the rectum that were treated by electrocoagulation had "positive" nodes at the time of operation.

The 5-year survival rates in cancer of the rectum are intimately related to the presence or absence of lymph node metastases. When the nodes are "negative", about three out of every four patients (72.0 per cent) survive, compared to an average survival rate of only about one in four (28.0 per cent) when they are "positive" (Table XIV). When the patients with "positive" and "negative" nodes are combined, the average overall 5-year survival rate is about 52.0 per cent. However, the absolute 5-year survival rates reported by Grinnell⁹, Hughes¹³, and Gilbertsen⁸ are 25.6 per cent, 38.6 per cent, and 40.0 per cent respectively.

Oftentimes it is reasoned that abdominoperineal resection with ligation of the inferior mesenteric artery at its origin from the aorta enhances the chance of cure by inclusion in the resected specimen of the high-lying nodes which may or may not contain metastatic foci, and thereby improve the results. However, Grinnell¹⁰ has shown that, when there are metastases to the lymph nodes about the origin of the inferior mesenteric artery, cancer cells have spread to other nodes and lymphatics beyond the reach of cure by operation. In his series none of the 19 patients with high-lying nodal metastases was salvaged by the extended operation.

How does this survival rate following abdominoperineal resection compare with that following treatment of cancer of the rectum by electrocoagulation? In this comparison it is assumed, as previously mentioned, that metastases to the regional lymph nodes were present in approximately half of the patients that were treated by electrocoagulation. However, neither the number of patients nor the duration of follow-up is sufficient to make a valid comparison. Nevertheless, the 35 patients with operable lesions that were ideally suited for treatment by abdominoperineal resection, but who instead were treated by electrocoagulation, are available for an absolute 5-18 year follow-up (Table XIII). Twenty-six (74.3 per cent) of the 35 patients lived 5 years, and 21 (60.0 per cent) are alive and well 5 years or longer, with an average survival of 7 years. Two of the four patients

who died of other causes lived more than 5 years, and neither had recurrent disease. Accordingly, 23 (65.7 per cent) of the 35 patients were free of disease 5 years and longer. Furthermore, when both the operable and the inoperable groups of patients are combined, 55 (50.0 per cent) of the original 110 patients are available for study. Twenty-five (45.5 per cent) of the 55 patients are alive and well 5 years or longer. A total of three patients died of other causes 5 or more years after treatment, and none had recurrent disease. Accordingly, 28 (50.9 per cent) of the 55 patients, or one in every two, lived 5 or more years without evidence of recurrence of the cancer.

A criticism of the series of patients reported is the unduly high percentage (30.0 per cent) comprising the inoperable group. Admittedly, this is true. However, this is readily explained by the fact that many of these were referred by other surgeons who had rejected them for treatment by resection. The terms operability and inoperability will, of course, vary from surgeon to surgeon. However, in keeping with the true meaning of the word, the patients in the inoperable group were indeed either unduly "high risks" or patients in whom, for one or more reasons, an abdominoperineal resection was contraindicated. Furthermore, age *per se* was not an indication for inoperability. However, among the criteria were such factors as senility, blindness, crippling infirmities in the aged and physical incapacitation from advanced stages of pulmonary emphysema and cardiovascular disease, cirrhosis of the liver, unresectable lesions on exploratory laparotomy, completely encircling lesions, and the presence of remote metastases. Heretofore, other than attempts at palliation by radiation therapy, nothing could be offered to these patients. Accordingly, and as a consequence, there is a high referral rate of patients classified as inoperable.

Another objection to the material presented is that a double blind, randomized study of matched pairs of patients was not done. Therefore, the results presented cannot be considered statistically significant. However many of the present and long established tenets for the treatment of various diseases, both medical and surgical, were not based on randomized, double blind studies. I refer in particular to liver and insulin in the treatment of pernicious anemia and diabetes respectively and also, to mention but a few, the surgical management of patients with hypersplenism, vascular diseases, and cancer in the various organs throughout

the body. One must avoid losing a proper perspective by becoming overly scientific or even pseudo-scientific. If, perchance, a spoiled egg is tasted or a tight shoe is worn, I am sure it would not be necessary to conduct a double blind, randomized study to tell if the egg was bad or the shoe was too tight. Similarly, if a patient with a proved cancer of the rectum is alive and well 12 or 13 years after its eradication by electrocoagulation, then seeing is believing. Indeed, in the evaluation of clinical studies a modicum of common sense should also prevail.

Progress in medicine can never be made without change, but change in itself does not necessarily mean progress. The relatively recent change in the treatment of cancer of the rectum by extension of the operation to include removal of as much of the lymphatic drainage as possible has failed to improve survival. Similarly, the intraperitoneal and postoperative use of chemotherapeutic drugs has similarly failed.

Electrocoagulation in the treatment of cancer of the rectum is a decided change relative to the generally accepted principles that have been established. Whether or not this particular change will result in progress is presently not known. However, the accumulated data presented would suggest the continued use of this method to determine its ultimate true value. This can be accelerated if prospective study groups are established in various centers throughout the nation as well as in other countries. If this method is truly worthwhile, then the results of electrocoagulation as presented should be readily duplicated provided the technic as described is practiced. The following quotation from Lord Bacon is believed most appropriate in relation to the treatment of cancer of the rectum by electrocoagulation: "Learn not on authority; the test of truth is time."

CONCLUSIONS

Electrocoagulation continues to be of proved merit in the treatment of cancer of the rectum.

The results following electrocoagulation are at least comparable to and in many respects exceed those following abdominoperineal resection.

REFERENCES

- ¹Bacon HE, Gutierrez RR: Cancer of the rectum and colon. Review of 2,402 personal cases. *Dis Colon Rectum* 10:61-4, Jan-Feb 67
- ²Byrne J: *Clinical Notes on the Electric Cautery in Uterine Surgery*. New York, William Wood & Co., 1873

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³Colecock BP, Jarpa S: Complications of abdomino-perineal resection. *Dis Colon Rectum*. 1:90-6, Mar-Apr 58

⁴Crile G Jr, Turnbull RB Jr: The role of electrocoagulation in the treatment of carcinoma of the rectum. *Surg Gynecol Obstet* 135:391-6, Sep 72

⁵Dorland's Illustrated Medical Dictionary, 24th Edition, Philadelphia, W. B. Saunders Company, 1965

⁶Ferguson LK, Boland JP, Thomen FJ: Anterior segmental resection for carcinoma of the upper rectum, rectosigmoid and sigmoid. *Surgery*. 52: 741-6, Nov 62

⁷Gabriel WB: In Maingot R: *Abdominal Operations*. 5th edition. New York, Appleton-Century-Crofts, 1969. Vol 2, P. 1750

⁸Gilbertson VA: Adenocarcinoma of the rectum. A 15-year study with evaluation of the results of curative therapy. *AMA Arch Surg* 80:135-43, Jan 60

⁹Grinnell RS: Results in the treatment of carcinoma of the colon and rectum. An analysis of 2,341 cases over a 35-year period with five year survival results in 1,667 patients. *Surg Gynecol Obstet* 96: 31-42, Jan 53

¹⁰Grinnell RS: Results of ligation of inferior mesenteric artery at the aorta in resections of the descending and sigmoid colon and rectum. *Surg Gynecol Obstet* 120:1031-6, May 65

¹¹Hayes HT, Burr HB: Mse of electroagulation in the treatment of tumors of the rectum. *Texas State J Med* 35:292-5, Aug 39

¹²Henschen C: Regeln und Instrumentarium zur perianalen Elektrokoagulation des Rectumcarcinoms. *Archf Klin Chir* 180:264-70, 34

¹³Hughes ESR: Results of treatment of carcinoma of colon and rectum. *Brit Med J* 2:9-12, 6 Jul 63

¹⁴Jackman RJ: Conservative management of selected patients with carcinoma of the rectum. *Dis Colon Rectum* 4:429-34, Nov-Dec 61

¹⁵Kergin FG: Diathermy fulgurization in the treatment of certain cases of rectal carcinoma. *Can Med Assoc J* 69:14-7, Jul 53

¹⁶Kiger WH: The Percy method of treating cancer of the uterus applied in the treatment of cancer of the rectum. *Tr Am Proct Soc* 23:102-9, 1923

¹⁷Lloyd-Davies OV: In Maingot R: *Abdominal Operations*, 5th edition. Vol. 2, pp. 1750-1751. New York, Appleton-Century-Crofts, 1969. Vol. 2, pp. 1750-1

¹⁸Madden JL, Kandalraft S: Electrocoagulation. A primary and preferred method of treatment for cancer of the rectum. *Ann Surg* 166:413-19, Sep 67

¹⁹Madden JL, Kandalraft S: Electrocoagulation in the treatment of cancer of the rectum. A continuing study. *Ann Surg* 175:530-40, Sep 71

²⁰Mayo CW, Lee MJ Jr, Davis RM: A comparative study of operations for carcinoma of the rectum and rectosigmoid. *Surg Gynec Obstet* 92:360-4, Mar 51

²¹Mayo CW, Fly OA: Analysis of five year survival in carcinoma of the rectum and rectosigmoid. *Surg Gynecol Obstet* 103:94-100, Jul 56

²²Miles WE: A method of performing abdomino-perineal excision for carcinoma of the rectum and of the terminal portion of the pelvic colon. *Lancet* 2:1812-3, 19 Dec 08

²³Morson BC, Vaughan EG, Bussey HJR: Pelvic recurrence after excision of rectum for carcinoma. *Brit Med J* 2:13-8, 6 Jul 63

²⁴Ottenheimer EJ, Oughterson AW: Observations on

cancer of the colon and rectum in Connecticut. An analysis based on 5,572 proved cases. *N Engl J Med* 252:561-7, 7 Apr 55

²⁵Percy JF: A technic for the radical cautery operation in breast cancer. *Ann Surg* 66:397-403, Oct 17

²⁶Percy JF: Cautery surgery in breast carcinoma. *Tr West Surg Assoc* 38:87, 1928

²⁷Pettit RT, Edgcomb JH: Critical analysis of methods of treatment of rectal carcinoma, particularly electrocoagulation. *Am J Surg* 34:57-64, Oct 36

²⁸Poirier A: A propos du traitement par diathermo-coagulation de 17 cancers du rectum. *Mem Acad Chir* 75:114-19, 26 Jan-2 Feb 49

²⁹Poirier A, Poirier B: Sur l'electro-coagulation dans le cancer du rectum. *Gaz Med France* 62:1525-8, Nov 55

³⁰Poirier A, Poirier JP: Electro-destruction dans les cancers du rectum. *Arch Fr Mal App Dig Suppl* 9:37-48, Sep 69

³¹Pruitt MC: Electrocoagulation of cancer of the rectum. *JMA Georgia* 27:229-30, Jun 38

³²Stearns MW Jr: Personal communication, Feb 71

³³Strauss AA, Strauss SF, Crawford RA, et al: Surgical diathermy of carcinoma of the rectum: Its clinical end results. *JAMA* 104:1480-4, 27 Apr 35

³⁴Strauss AA, Appel M, Saphiir O, et al: Immunologic resistance to carcinoma produced by electrocoagulation. *Surg Gynec Obst* 121:989-96, Nov 65

³⁵Strauss AA: Immunologic Resistance to Carcinoma Produced by Electrocoagulation. Springfield, Illinois, Charles C. Thomas, 1969

³⁶Thorlakson PHT, Hay AWS: Carcinoma of the rectum and rectosigmoid (report of 89 cases with special reference to electrocoagulation in selected cases. *Can Med Assoc J* 38:107-19, Feb 38

³⁷Wassink WF: The curative treatment of carcinoma recti by means of electrocoagulation and radium. *Arch Chir Neerl* 8:313-30, 1956

³⁸Waugh JM, Kirklin JW: The importance of the level of the lesion in the prognosis and treatment of carcinoma of the rectum and low sigmoid colon. *Ann Surg* 129:22-33, Jan 49

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A complimentary copy of the 1973-1974 membership directory will be mailed to all members of the Society in the next few weeks. Additional copies may be purchased from the Executive Office at a charge of \$1.00 to members and \$3.00 to non-members. The task of compiling the data for the directory is a formidable one due to continual changes of addresses and telephone numbers.

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- ³⁸MacGregor GA, Poole-Wilson PA, Jones NF: Phenformin and metabolic acidosis. *Lancet* 1:69-71, 8 Jan 72
- ³⁹Czyzyk A, Tawecki J, Sadowski J, et al: Effect of biguanides on intestinal absorption of glucose. *Diabetes* 17:492-8, Aug 68
- ⁴⁰Casparly WF, Creutzfeldt W: Analysis of the inhibitory effect of biguanides on glucose absorption: inhibition of active sugar transport. *Diabetologia* 7:375-85, Oct 71
- ⁴¹Wick AN, Stewart CJ, Serif GS: issue distribution of C-¹⁴-labelled beta-phenethylbiguanide. *Diabetes* 9:163-6, May-Jun 60
- ⁴²Berchtold P, Dahlqvist A, Gustafson A, et al: Effects of a biguanide (Metformin) on Vitamin B₁₂ and folic acid absorption and intestinal enzyme activities. *Scand J Gastroenterol* 6:751-4, 1971
- ⁴³Stowers JM, Bewsher PD: Studies on the mechanism of weight reduction by phenformin. *Postgrad Med J* 45:12, May 69
- ⁴⁴Permutt MA, Kelly JJ, Bernstein R, et al: Alimentary hypoglycemia in the absence of gastrointestinal surgery *Diabetes* 20:344, May 71
- ⁴⁵Davidoff F: Effects of guanidine derivatives on mitochondrial function. III. The mechanism of phenethylbiguanide accumulation and its relationship to in vitro respiratory inhibition. *J Biol Chem* 246:4017-27, 25 Jun 71
- ⁴⁶Davidoff F: Effects of guanidine derivatives on mitochondrial function. IV. Changes in citric acid cycle intermediates and NADH. *J Bioenerg* 3:481-98, 72
- ⁴⁷Davidoff F, Carr S: Calcium-like action of phenethylbiguanide and related compounds: inhibition of pyruvate kinase. *Proc Nat Acad Sci USA* 69:1957-61, Jul 72
- ⁴⁸Kudzmaj DJ, Bradley EM, Lecocz R: Effect of tolbutamide on body composition in maturity-onset diabetics. In *Brook Lodge Conference Tolbutamide After Ten Years* (cit. No. 8). Pp. 177-85.
- ⁴⁹Muting VD: Untersuchungen über die Wirkung eines Biguanids auf den Eiweißstoffwechsel und die Entgiftungsleistung der Leber bei Diabetes mellitus. *Deutsch Med Wschr* 89:1583-6, 21 Aug 64
- ⁵⁰Turtle JR: Glucose and insulin secretory response patterns following diet and tolazamide therapy in diabetes. *Brit Med J* 3:606-10, 12 Sep 70
- ⁵¹Katz HM, Bissel G: Blood sugar lowering effects of chlorpropanamide and tolbutamide. A double blind cooperative study. *Diabetes* 14:650-7, Oct 65
- ⁵²Editorial. Restraint in use of oral antidiabetic drugs. *N Engl J Med* 277:486, 31 Aug 67
- ⁵³University Group Diabetes Program (UGDP): A study of the effects of hypoglycemic agents on vascular complications in patients with adult-onset diabetes. *Diabetes* 19 (Suppl 2): 747-830, Oct 70
- ⁵⁴Knatterud GL, Meinert CL, Klimt CR, et al: Effects of hypoglycemic agents on vascular complications in patients with adult-onset diabetes. IV. A preliminary report on phenformin results. (Prepared for the University Group Diabetes Program). *JAMA* 217:777-84, 9 Aug 71
- ⁵⁵Seltzer HS: A summary of criticisms of the findings and conclusions of the University Group Diabetes Program (UGDP). *Diabetes* 21:976-9, Sep 72
- ⁵⁶Prout TE, Knatterud GL, Meinert CL, et al: The UGDP controversy. Clinical trials versus clinical impressions. *Diabetes* 21:1035-40, Oct 72



PEER REVIEW

(Concluded from page 408)

tions of the present State Peer Review Committee, probably absorbing it as a functioning entity.

Its computer storage and retrieval functions would be contracted for with Rhode Island Blue Cross and Blue Shield. Blue Cross and Blue Shield should arrange to take over the responsibility of HARI which is currently receiving PAS-MAP Summary Reports and quarterly LOS packages of all hospitals from CPHA. Whether or not all PAS-MAP data should be received can be determined later based on technical requirements. Blue Shield would supplement these data with its current Utilization Review Package. To the extent that these resources are inadequate or could not be developed to meet all needs for establishment of criteria and study of patterns of care, the Blue Cross and Blue Shield data bank could be programmed to furnish the additional data.

A retrieval and study team could be developed at Blue Cross and Blue Shield from current or additional personnel as the needs of the program are demonstrated.

SUMMARY

- 1) All hospitals will implement medical audit under PAS-MAP.
- 2) The State Medical Society will develop a PSRO.
- 3) The PSRO will probably absorb the functions of the present State Peer Review Committee.
- 4) The PSRO will contract with Blue Cross and Blue Shield to conduct its data storage, retrieval, and study functions.
- 5) All PAS-MAP data currently in repository at HARI will be transferred to Blue Cross and Blue Shield. This is desirable on a short term as well as on a long term basis. Whether all PAS-MAP data as received by hospitals should be included can be determined later as technical requirements become clearer.
- 6) The three data bases — the Blue Cross and Blue Shield bank, the Blue Shield Utilization Review Package, and PAS-MAP — should be coordinated.
- 7) The Blue Cross and Blue Shield data may then be programmed to complement the other data resources as need is demonstrated.

This proposal appears to provide a comprehensive plan for coordinated Peer Review throughout the State utilizing currently available resources.



TWO SENTENCE ESSAY

Marry the Boss's Daughter Department

We must not forget the women of the Mayo family who played such an important role in the later success of the clinic. Observe for a moment the men that they married (i.e., Henry Plummer, Donald Balfour, E. Starr Judd, Fred Rankin, and Waltman Walters), all household names in medicine and surgery.

... R. R. White III, Presidential Address, Western Surgical Association.

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FARRELL RECEIVES OSTEOPATHIC AWARD

John E. Farrell, Executive Secretary Emeritus, was presented the Distinguished Service Award of the Rhode Island Society of Osteopathic Physicians and Surgeons at the 2nd New England Osteopathic Assembly held at North Falmouth on October 13.

Cited for his "singular cooperation and support on behalf of the osteopathic profession," Farrell became the first person not an osteopathic physician to receive the award in the history of the society. A dinner audience of more than 200 from Rhode Island, Massachusetts and Connecticut gave him a standing ovation at the presentation.

Social Security Disability Plan Summarized

Dr. Paul J. Conley, Chief Medical Consultant of the Disability Determination Unit of the Rhode Island Dept. of Social and Rehabilitative Services, has submitted the following report to the executive office for the information of the membership:

Under the provisions of the social security disability program, the nation's largest disability plan, a worker under 65 can receive monthly benefits if he or she becomes unable to work due to a mental or physical impairment that has lasted — or is expected to last — at least 12 months or is expected to result in death.

More than 96 million workers can count on monthly cash benefits in the event of such severe and extended disability. In addition, the dependents of these workers are also eligible for monthly benefits. Over 1.8 million workers and 1.4 million dependents are now receiving dis-

(Continued on Page 5)

Improvements in the Medical Fee Schedules Under Medicaid Listed

Dr. Peter L. Mathieu, Jr., Chairman of the Social Welfare Committee, announced at the meeting of the House of Delegates the following improvements in medical fee schedules under Medicaid starting October 1, 1973.

1. Increase the allowance for the routine follow-up office visit *from* the usual and customary charges as filed with the Fiscal Intermediary on January 1, 1969, *up to* a maximum allowance of \$10.00 *to* the usual and customary charge as filed with the Fiscal Intermediary on July 1, 1973, *up to* a maximum of \$10.00. (Simply updating the acceptable certified usual and customary charge with the same prevailing limitation of \$10.00.) This points to the value of updating by the physician his usual and customary charges to remain au courant.
2. Increase the maximum allowance for multiple surgical procedures performed in a 90-day period related to the same condition *from* \$4 to \$750. (Physician Service Plan B.)
3. Increase the fee for visits to patients residing in Skilled Nursing Homes and Intermediate Care Facilities as follows:

	<i>From</i>	<i>To</i>
First patient	\$10.00	\$10.00
Second patient	5.00	10.00
Third patient	3.00	5.00
Fourth patient	—	5.00
(Maximum payment for a single visit regardless of number of patients seen)	18.00	30.00

4. Make provision for payment for Echoencephalogram at the rate of \$25.00 when performed in a physician's office (neurologists and neurosurgeons engaged in the practice of neurology and neurosurgery)
5. Increase the reimbursement for a comprehensive eye examination when performed by an ophthalmologist from \$15.00 to \$17.00. This applies only to the complete eye examination provided by the ophthalmologist and does not apply to routine follow-up office visits.
6. Effect the following revisions in the x-ray fee schedule:

	<i>From</i>	<i>To</i>
Chest x-ray (PA & Lateral)	\$12.00	\$15.00
Lumbo-sacral spine and pelvis	15.00	20.00
Barium enema	25.00	30.00
Barium enema with air contrast studies	25.00	35.00
KUB (Flat — plate of abdomen)	10.00	15.00
x-ray of hips	10.00	15.00
x-ray of knees	10.00	15.00

For the first time, a separate fee will be allowed for the circumcision of newborn babies.

PROPOSED NEW REGULATIONS

Doctor Mathieu also pointed out proposed regulations countersigning physicians' oral orders for drugs by the attending physician within 48 hours. Doctor Mathieu said that it was recommended by the Social Welfare Committee and the Department of Social Services that the time restriction be deleted and that the physician be required to countersign all oral orders not

(Concluded on Page 5)

SECRETARY REPORTS COUNCIL ACTIVITIES

Dr Stephen J. Hoyer, Secretary of the Society, reported the major actions of the Council since the last meeting of the House in March. Doctor Hoyer noted that the Council has held three regular meetings and one special meeting.

A summary of the Council's actions follow:

Approval was given of the President's appointment of Howard S. Browne, Jr., M.D., of Newport as Trustee-at-Large to the Board of Trustees of the Medical Library for 1974.

The Council commended Dr. A. A. Savastano for his assiduous efforts in organizing the nationally known and highly successful Medical Aspects of Sports Conference held at the University of Rhode Island.

The Council was informed of the following information relative to the Phase IV Price Regulations: "Physicians may raise their fees a maximum of 2.5% per year, provided the raise does not increase their profit margin. If a physician has not raised his fees since the institution of wage and price controls in 1971, the physician may raise his fees a cumulative total of 5%, provided he does not violate the profit margin in doing so. Physicians are no longer required to post signs under the Phase IV regulations." Notices were inserted in the July and September issues of the *Rhode Island Medical Journal*.

Doctor Hackman Commended

The Council noted that the newspapers had commented on the President's fine presentation opposing the drug formulary and drug substitution bills at the hearings before the House and Senate Committees of the Rhode Island General Assembly.

The President commended Dr. Robert V. Lewis for his excellent presentation at the PSRO meeting of the Rhode Island Department of

Health in August. Dr. Lewis spoke on behalf of R. I. PSRO, Inc. and gave sound reasons as to why Rhode Island should have a single statewide PSRO designation.

The Council was informed that Dr. Donald B. Effler, The Cleveland Clinic, Cleveland, Ohio, has been named as the 1974 Chapin Orator. Dr. Russell B. Roth, President of the American Medical Association, has also been invited to address the Society's Annual Meeting on Wednesday, March 13, 1974, at the Colonial Hilton Inn.

The Council cited Dr. Earl J. Mara for his long, faithful and loyal service to the Rhode Island Medical Society. Doctor Mara, former President of the Society, was a member of the Council for many years during the past three decades.

Approval was given the joint billing procedure whereby, commencing in 1974, RIMPAC dues will be included with the Medical Society annual dues statement.

The Council was informed of the staff preparation of the Blue Cross-Blue Shield mailing for 1973-1974 and that Blue Shield Plan 100 will be offered to the membership providing that a sufficient number (50%) of physicians subscribe to the plan.

The Council voted to support a surgical study to be conducted by Rhode Island Health Services Research, Inc. The request for support originated with the American College of Surgeons.

Regarding the problems of claims payments and the supply of patient data to the Rhode Island Group Health Association, the Council voted:

1) That physicians need to furnish only summary reports on patients on request from the physician in charge of the R. I. Group Health Association, as they would do for any insurance company request.

2) That the issue regarding payment of unusual and customary fees for R. I. Group Health Association patients referred to a physician as a private patient be referred to the Ad Hoc Committee for Review of the R. I. Group Health Association with the request that it resolve the matter and establish guidelines as necessary.

Appointment Approved

The Council approved of the appointment of Dr. George Monahan, Chairman of the Committee on Occupational Health, as official delegate to the 33rd Annual Congress on Occupational Health.

The President informed the Council of his July appearance on Channel 12 TV in which he fielded questions pertaining to the scientific value of acupuncture.

The Council was informed that Dr. Robert V. Lewis, Immediate Past President, was named to the Graduate Medical Education Council of Brown University.

The Council approved a resolution which was submitted to the American Medical Association House of Delegates and subsequently adopted concerning the development of compatibility of coding systems and of diagnostic codes for hospital discharge data. This resolution also required the AMA Council on Medical Service to report back any results to the House of Delegates at the 1973 Clinical Convention.

The Council voted to express to the officials of the State Department of Corrections, and to the Governor, that the Society is concerned about the health care of the inmates of the ACI, and that it is prepared to establish an Advisory Committee to the Director to assist in any way possible toward solutions to current problems. Since the vote of the

(Continued on Page 6)

Secretary Reports

(Concluded from Page 3)

Council, the Committee under the Chairmanship of Richard D. Baronian, M.D., has met with the Department of Corrections officials and is awaiting specific guidelines regarding the committee's role in reviewing medical care at the prison. The other members of the Committee are: Ronald J. Cavanagh, M.D., Mary P. Colbert, M.D., Joseph Donahue, M.D., Peter Mathieu, M.D., Mildred Robinson, M.D. and H. Denman Scott, M.D.

Program Endorsed

The Council voted that the Rhode Island Medical Society endorse the efforts of the Rhode Island Ophthalmological Society to engage a public relations firm to publicize widely the ophthalmological and optometric issues resulting from the legislative action.

The Council reaffirmed its mail ballot in July which endorsed the Health Planning Council's project to attain an "Optimum Balance of Health Care Facilities and Services" for Rhode Island.

The Council approved the appointment of a representative of the Child-School Health Committee to attend the 14th National Conference on Physicians and Schools to be held on October 4-6. Dr. Betty Mathieu represented the Society at this meeting.

Approval was given for the Woman's Auxiliary to present an AMA-ERF check in the amount of \$1,361.42 sent to the Society as a contribution for Brown University Medical School.

The Council was informed of the appointment of Dr. Allan R. G. Wallace of Newport as a representative of the Society to the Governor's Permanent Advisory Council on Drug Abuse Control.

The Council agreed that letters of dispute concerning fees should be forwarded to the Chairman of the

12 Tips Offered For Controlled Drugs

(1) Keep your prescription blanks in a safe place where they can't be stolen easily. Minimize the number of Rx pads in use.

(2) Write Rx's for Schedule I drugs in ink or indelible pencil or use a typewriter. They must be signed by the physician.

(3) Write out the actual amount prescribed in addition to giving an arabic number or roman numeral — in order to discourage alterations in written prescriptions.

(4) Avoid writing prescriptions for large quantities of controlled drug products unless you absolutely determine that such quantities are necessary.

(5) Maintain only a minimum stock of controlled drugs in your medical bag.

(6) Take your medical bag with you when you're away from your automobile or lock it in the trunk.

(7) Be cautious when a patient tells you that another physician had been prescribing a controlled drug product for him. Consult the physician or the hospital records — or else examine the patient thoroughly and decide for yourself if a controlled drug product should be prescribed.

(8) Prescription blanks should only be used for writing prescriptions — and not for notes or memos. A drug abuser could easily erase the message, and use the blank to forge a prescription.

(9) Never sign Rx blanks in advance.

(10) Maintain an accurate record of controlled drug products you have dispensed — as required by the Controlled Substances Act of 1970 and its regulations. However, you may administer medication to a patient in the course of your normal professional practice without maintaining any record.

(11) Assist the pharmacist when he telephones you to verify information about a prescription you may have written. A corresponding responsibility rests with the pharmacist who dispenses the prescription.

(12) Phone the nearest office of the Drug Enforcement Administration to obtain or to furnish information. Your call will be held in the strictest confidence.

Mediation Committee who would then screen them for a possible malpractice or legal involvement. The Chairman would transmit to the State Committee on Peer Review those letters which do not seem to involve possible litigation.

The Council endorsed a "State-Wide Conference on the Hospital Care of the Alcoholic" held on October 16 and 17 at the Butler Health Center.

HEALTH DEPT. NEEDS MDs

Physicians are wanted by the Rhode Island Department of Health to participate in medical review for in-patients in skilled nursing homes. Payment for services are on a per diem basis. Those physicians who are interested in such medical review, please contact Mr. Anthony Incolingo at 277-2566.

Healing nicely, but it still **HURTS**

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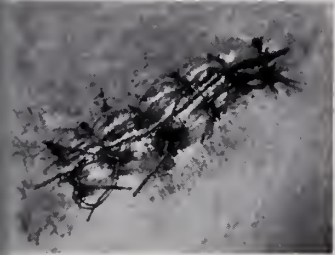
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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

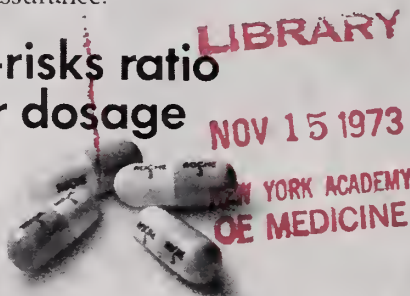
Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



November 1973
Vol. 56, No. 11

BALCONY





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and a few may need counseling
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Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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To help you manage excessive psychic tension

Rhode Island Medical Journal

NOVEMBER, 1973

VOLUME 56, No. 11

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COVER: Beyond their decorative function, these ivory or alabaster figurines, which were found in the homes of Chinese high society, were used medically; if the mistress of the house was ill, instead of disrobing in the physician's presence, she simply showed him on the statuette the exact part of the body that was causing her trouble.—Rouge Collection, Paris

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Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasias); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardley, New York 10502



More than sleep

your choice of sleep medication
is wisely based on more than
sleep-inducing potential

sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights.

In most instances when adverse reactions were reported, they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

sleep for 7 to 8 hours
without need to
repeat dosage

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

sleep with
consistency

Dalmane has been shown to be consistently effective even during consecutive nights of administration, with no need to increase dosage.

Dalmane (flurazepam HCl) is a distinctive sleep medication—a benzodiazepine specifically indicated for insomnia. It is not a barbiturate or methaqualone, nor is it related chemically to any other sedative hypnotic.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, non-tolerant agent proved effective and relatively safe for relief of insomnia.

DALMANE[®]

(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdose, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage, 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



ROCHE LABORATORIES
Div., Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

It's time for action to defend the law and regulations that protect your patients against drug substitution.

**These professional and trade organizations are united
in supporting antisubstitution statutes and regulations**

The American Academy of Dermatology

The Board of Directors of the
American Academy of Family
Physicians

The Executive Board of the
American Academy of Neurology

The Committee on Drugs of the
American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the
American College of Obstetricians
and Gynecologists

The Board of Regents of the
American College of Physicians

The Board of Trustees of the
American Dental Association

The Board of Trustees of the
American Medical Association

The American Psychiatric Association

The Executive Committee of the
National Association of Retail
Druggists

The Board of Directors of the
Pharmaceutical Manufacturers
Association

The National Wholesale Druggists'
Association



Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations which prohibit unauthorized substitution and encourage joint discussion and selection of the best source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus protected and preserved in the interest of patient welfare.

The antisubstitution laws have obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists of their responsibilities to patients. In practical matter, however, such laws and regulations encourage interprofessional communications regarding drug product selection and assure the profession the opportunity to exercise fully its expertise in drug selection, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that

economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

*Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D. C. 20005*



ROCHE announces
new

BACTRIMTM

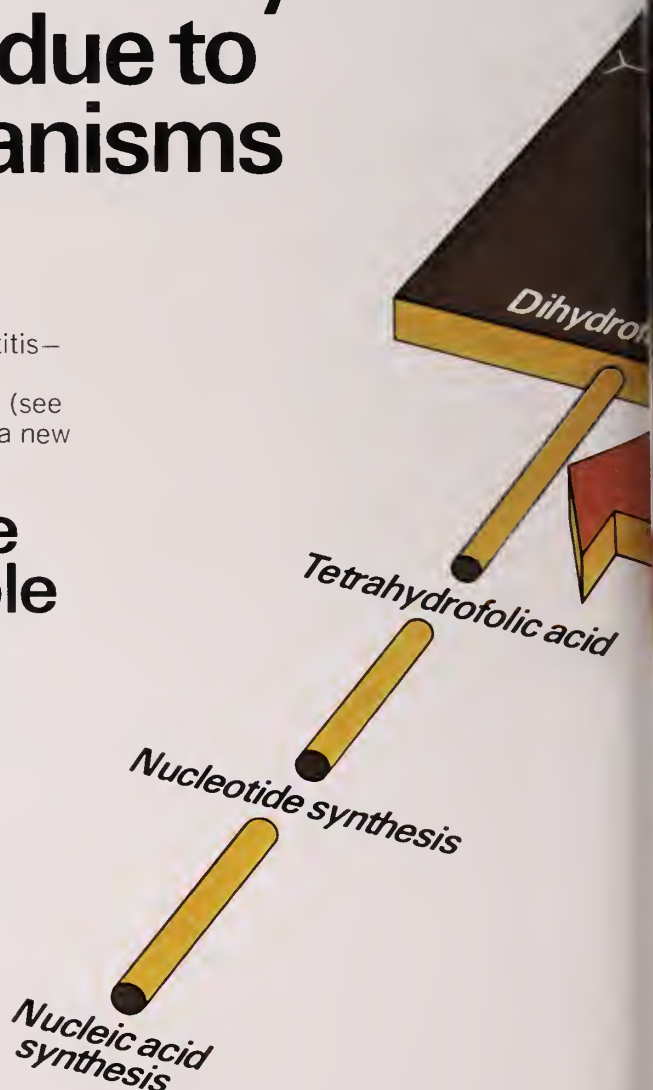
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

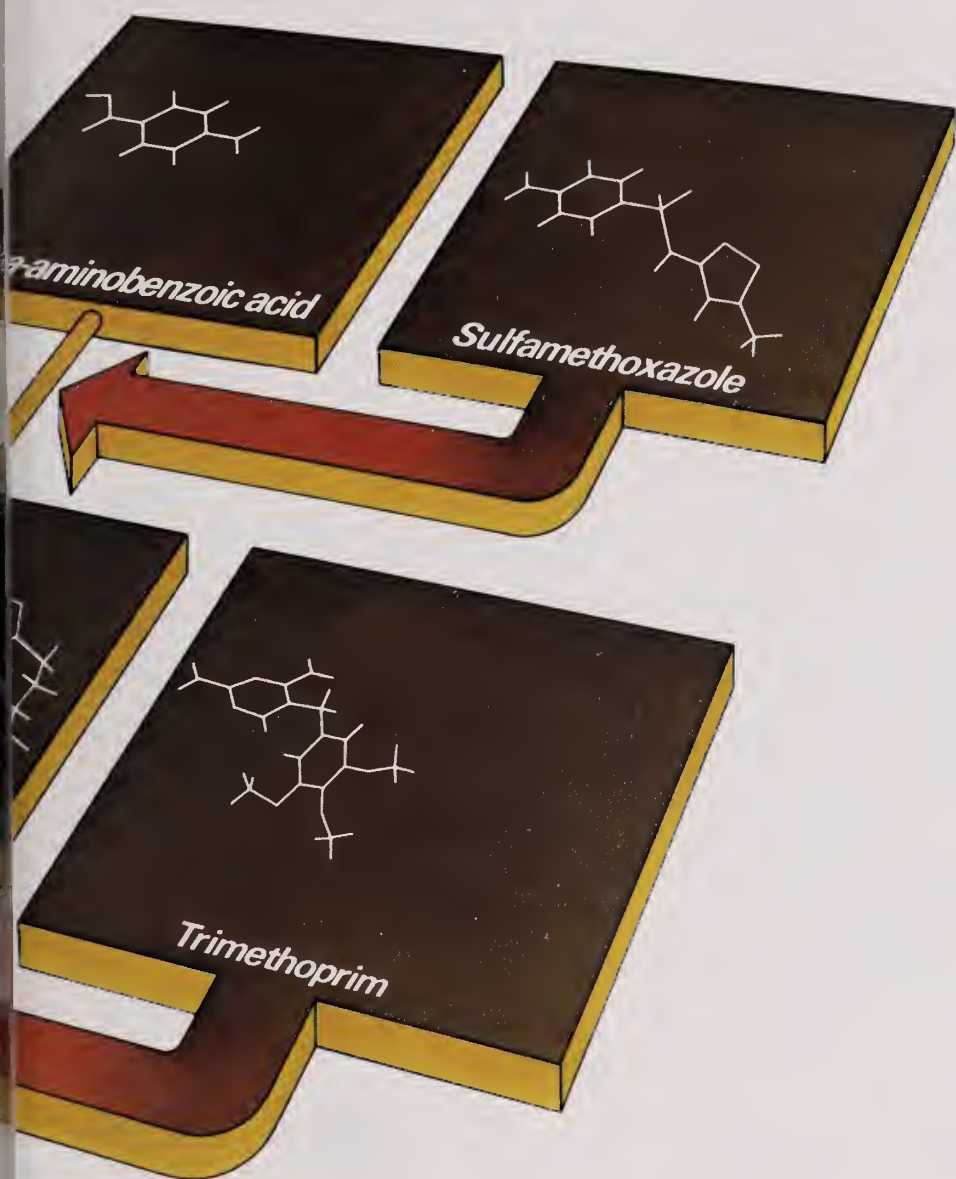
a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

Bactrim is highly effective in the treatment of these infections — primarily pyelonephritis, pyelitis and cystitis — when due to susceptible organisms. This efficacy is related to the unique mode of action against bacteria (see illustration), an action that, in effect, makes Bactrim a new type of antibacterial.

Bactrim interrupts the life cycle of susceptible bacteria

Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.





new **BACTRIMTM**

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

for chronic urinary tract infections

Before prescribing, please see complete product information on last page of advertisement.

Excellent clinical response in chronic urinary tract infections even with obstructive complications

A multiclinic, double-blind study* of response to a ten-day course of therapy in 471† patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim, compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. More than half of these patients had obstructive complications.

Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after a ten-day course of therapy with Bactrim, 68.4% of patients with chronic urinary tract infections *maintained* response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. These results are particularly noteworthy considering the number of patients with obstructive complications—cases regarded as being notoriously difficult to treat.

Prescribing considerations

Clinical Limitations: Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections. Not recommended for children under twelve.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period.

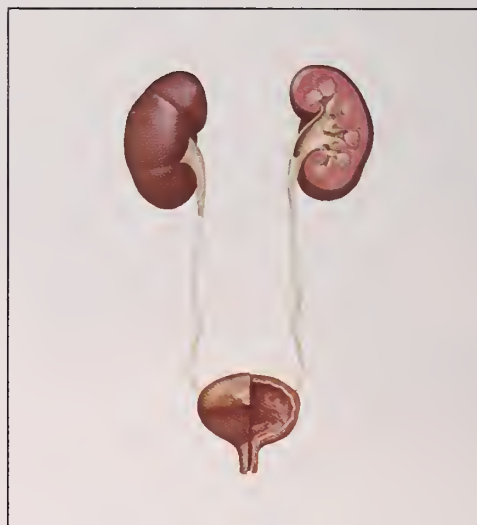
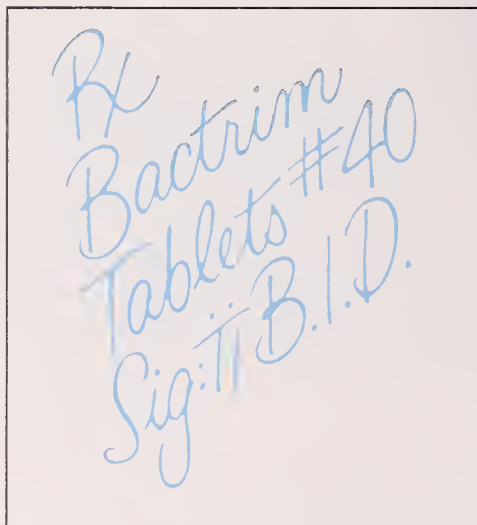
Warnings and Precautions: Both sulfamethoxazole and trimethoprim have been reported to interfere with hematopoiesis. Complete blood counts should be done frequently. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued. Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. Maintain adequate fluid intake. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

Adverse Effects: Among the most common side effects are nausea, vomiting, rash, leukopenia and elevations in SGOT and creatinine.

Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110

†4 patients not available for evaluation at day 10.



new **BACTRIM**™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

for chronic urinary tract infections



Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley, N.J. 07110

Before prescribing, please consult complete product information on facing page.

Complete Product Information:

Description: Bactrim is a synthetic antibacterial combination product, available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl) pyrimidine. It is a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is *N*-(5-methyl-3-isoxazolyl)sulfanilamide. It is almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

Actions: Microbiology: Sulfamethoxazole inhibits bacterial synthesis of dihydrofolic acid by competing with *para*-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

In vitro studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

In vitro serial dilution tests have shown that the spectrum of antibacterial activity of Bactrim includes the common urinary tract pathogens with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)				
Bacteria	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20) TMP SMX	
<i>Escherichia coli</i>	0.05—1.5	1.0 —245	0.05—0.5	0.95— 9.5
<i>Proteus</i> spp.	0.5 —5.0	7.35 —300	0.05—1.5	0.95—28.5
<i>Indole positive proteus</i>	0.5 —1.5	7.35 — 30	0.05—0.15	0.95— 2.85
<i>Mirabilis</i>	0.15—5.0	0.735—245	0.05—1.5	0.95—28.5
<i>Klebsiella-Enterobacter</i>				

Human Pharmacology: Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to four hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. Repeated administration, the steady-state ratio of trimethoprim to sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the therapeutically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma increases the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than the concentrations in the blood. When administered together in Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

Indications: Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

Important note: Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period (see Reproduction Studies).

Warnings: Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

Precautions: Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

Adverse Reactions: For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

Blood dyscrasias: Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia.

Allergic reactions: Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

Gastrointestinal reactions: Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

C.N.S. reactions: Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

Miscellaneous reactions: Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

Dosage and Administration: Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:


Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

How Supplied: Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

Reproduction Studies: In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.

BACTRIM™
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

 Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley N.J. 07110

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When it comes to making investment decisions, there's nothing like 20 or 30 years' hindsight.

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BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

MEDICAL EVENTS CALENDAR

Wednesday, December 12, 1973

ENDOCRINE ASPECTS OF METABOLIC DISEASE

Milton W. Hamolsky, M.D.
Physician-in-Chief
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Thursday, December 13, 1973

THE THERAPY OF ADOLESCENT SCHIZOPHRENIA

Derek H. Miller, M.D.
Chief, Adolescent Service and Associate Chair-
man, Department of Psychiatry
University Hospital, Ann Arbor, Mich.

Butler Hospital
Ray Hall
4:30 p.m. to 6:00 p.m.

Friday, December 14, 1973

USES AND ABUSES OF DIGITALIS

Allan Goldblatt, M.D.
Associate Professor of Pediatrics, Harvard Med-
ical School, Chief, Pediatric Cardiology,
Massachusetts General Hospital

Roger Williams Hospital
Kay Auditorium
10:30 a.m. to 12 noon

Wednesday, December 19, 1973

RADIOLOGICAL ASPECTS OF METABOLIC DISEASE

Thomas Forsythe, M.D.
Radiologist
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Wednesday, January 2, 1973

FAT EMBOLISM

Karl E. Karlson, M.D.
Surgeon-in-Chief, Cardio-Thoracic Surgery
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

MEDICAL EVENTS CALENDAR

Wednesday, January 9, 1974

ORTHOPAEDIC NEUROLOGY

John O. Strom, M.D.

Director, Electroencephalography

Rhode Island Hospital

Rhode Island Hospital

8th Floor Conference Rm.

1:00 p.m.

Friday, January 11, 1974

MENINGOCOCCAL DISEASE — PREVENTION AND PROPHYLAXIS

Ronald Gold, M.D.

Assistant Professor of Pediatrics, University of

Connecticut Health Center

Hartford, Connecticut

Roger Williams Hospital

Kay Auditorium

10:30 a.m. to 12 noon





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

Medical Education Program — Status Report

1.) Administrative Organization

With the implementation of the M.D. program in January 1973, the Division of Biological and Medical Sciences was given a new structure to administer its added responsibilities. Dr. Pierre M. Galletti now serves as Vice President of the University with responsibility over all matters that relate to Biology and Medicine. Dr. Elizabeth H. Leduc, in the new position of Dean of the Division, has become the principal academic officer for the entire Division with direct authority over undergraduate and graduate programs in Biology. Dr. Stanley M. Aronson serves as Dean of Medical Affairs with direct authority over the Program in Medicine (i.e. the four years leading to the M.D. degree), graduate, and continuing medical education. Messrs. Levi C. Adams and William D. Howe have been promoted to the positions of Assistant Vice Presidents (External Affairs and Business Affairs respectively).

2.) Curriculum

The preaccreditation visit of the Brown Program took place in August 1972. Based on the results of the survey, which were officially communicated in November 1972, the clinical component of the M.D. program was implemented with a pilot group of 12 medical students starting on January 30, 1973 and with a full class of 60 students starting August 1, 1973.

The two years of essentially clinical training are to be divided into seven 12-week modules, with a week of vacation between each. Five required modules will be spent on total immersion clerkships in Medicine, Surgery, Human Growth and Development (half Pediatrics, half Obstetrics), Psychiatry, and Community Health (one half for each) and a clinical area left to the choice of the student. The remaining two modules may be devoted to investigative pursuits, campus studies

(whether in the Division or the University at large), or clinical studies (in Providence or elsewhere).

Special programs are being developed under varied sponsorship including exercises in Socio-economic Medicine, Alcoholism, Urban Studies and Medicine, Human Sexuality, and Medical Ethics.

3.) Faculty Augmentation

Four new clinical faculty groupings (sections) have been constituted or expanded recently under new leadership. Psychiatry and Human Behavior, under the leadership of Dr. Ben W. Feather from Duke University, has now gathered seven full-time faculty members at the Butler and Veterans' Administration Hospitals. Human Growth and Development, under Dr. Leo Stern from McGill, is now established as a single group at the Lying-In Hospital and Rhode Island Hospital, and is currently seeking senior full-time leadership in Obstetrics and Neonatology. Radiation Medicine, under Dr. Arvin S. Glicksman from Mount Sinai Medical School, will occupy a new radiotherapy facility at Rhode Island Hospital in early spring of 1974. Community Health has been given leadership in the person of Dr. Alfred Wessen, Professor of Sociology at Brown since 1970, and formerly director of the Behavioral Science Division of World Health Organization in Geneva.

Another essential development is the addition of about 120 part-time, voluntary members to the Division faculty. The experience with the clerkships in Surgery at the Rhode Island and The Miriam Hospitals suggest that voluntary faculty can play an important role in the tutorial training which is so much a part of our clinical program. Altogether we have now over 200 part-time clinical faculty, which is close to 20 per cent of the practicing physicians in Rhode Island.

(Continued on next page)

4.) *Hospital Relationship*

In January 1973, the Brown Program in Medicine entered into formal affiliation agreement with the Providence Veterans' Administration Hospital, supplementing previously established agreements with six other hospitals. An agreement with Bradley Hospital (a facility for emotionally disturbed children) is to be signed shortly bringing the complement of beds in the affiliated institutions to about 2,000 or about one-half of the short-term care hospital beds in Rhode Island.

Additional associations for specific purposes are currently under negotiation with the Newport Hospital (Community Mental Health Center), the Hussey City Hospital and Truesdale Clinic in Fall River, Massachusetts (Rehabilitation Medicine), and the Rhode Island State Health Department (Public Health), and negotiations will be extended to other institutions as opportunities arise.

5.) *Relationship to Rhode Island Medical Society*

The Liaison Committee between the Medical Society and the Brown program has continued to meet regularly throughout the year. At its suggestion, practicing physicians were invited to form the Board of Interviewers, a group that personally interviews all candidates for admission to medical school at Brown, including those enrolled as college freshmen. Twenty members of the Medical Society, from as far as Kingston and Newport, interviewed candidates in February, March, and September 1973 and participated in debriefing sessions designed to improve the system for next year's round of admissions.

The RHODE ISLAND MEDICAL JOURNAL now features a regular editorial column which allows officials of the Medical Program to share their problems with the medical community and to keep it informed of new developments.

Lectures and seminars organized by the Medical Program are now brought to the attention of the profession by the inclusion of a yellow announcement card which is inserted in the RHODE ISLAND MEDICAL JOURNAL at the time of mailing.

6.) *Student Body*

Three classes of 60 students are now enrolled in the Program in Medicine. Of the total, 25 per cent are women and 22 per cent are Rhode Islanders. Recruitment of minority students in the lower (college) classes of the Medical Education

Program has not yet had a significant impact at the medical school level.

Starting in 1973-74 we plan to enroll about two-thirds of the class at the college freshmen level, and one-third at the first year of medical school level. At the college level, we are planning jointly with the Brown University faculty a Medicine-Humanities option to parallel the Medical Sciences option.

We are also discussing early identification of distinguished college freshmen in the premedical programs at Providence College and the University of Rhode Island in order to facilitate access to the Brown Program in Medicine to state residents enrolled at those institutions.

7.) *Finances*

The Brown Medical Education Program has been the recipient of a \$3,000,000 grant from H.E.W. Bureau of Health Manpower for the purpose of conversion to a full M.D. program. This grant will help us to cover the costs of expansion in the clinical area in the period up to 1975.

The State Legislature in April 1973 authorized a \$400,000 contract for medical education services in 1973-1974. This budget item was hotly debated around the question of enrollment of state residents, but the demonstration of concern for local applicants and the development of an informal key putting weight on enrollment of state residents avoided the inclusion of any quota system.

A local fund-raising campaign was started in November 1972 and closed in June 1973, having exceeded its goal of \$3,000,000 in contributions and pledges toward a beginning endowment of the Medical Education Program. This constitutes an appreciable demonstration of support by our local community, which in our view had to precede any concentrated efforts to raise funds on the national level.

At this point, the financial position of the Brown program is still precarious. Whereas we can see our way clear up to 1975-76, the latter part of this decade will be a difficult one. Thus, it is imperative that we continue to develop support both for operating expenditures and toward the constitution of reserves or endowment to avoid over-dependency on often unpredictable federal and state support.

PIERRE M. GALLETTI, M.D., Ph.D.

September 20, 1973



A Report Of The House Of Delegates Of The Rhode Island Medical Society

A Summary Of The Meeting Of October 3, 1973

A regular meeting of the House of Delegates of The Rhode Island Medical Society was held at the Medical Library, Providence, Wednesday, October 3, 1973. The meeting was called to order by the Speaker of the House, Dr. Herbert F. Hager at 8 p.m.

ADDRESS OF THE SPEAKER

The meeting will come to order.

It is a pleasure to welcome to this meeting, the former members, the new members, delegates, officers, ex-officio members, representatives of the specialty societies, commissioners, chairmen, and guests.

Because of the large number of new members, with whom we all wish to become acquainted, the chair requests that each person will rise when the secretary calls his name, so that he may be recognized. The chair proposes that this practice be continued at future meetings so that we can more speedily become acquainted with each other.

The Secretary will call the Roll. (The roll is called).

* * *

Delegates in attendance were: Drs. Herbert F. Hager, Thomas F. Head, David Newhall, Carl V. Anderson, Robert E. Baute, Charles B. Round, Joseph E. Wittig, Charles S. Dotterer, David R. Hallmann, Richard Kuhn, James A. McGrath, Erwin Siegmund, Leonard S. Staudinger, Edmund T. Hackman, Stephen J. Hoyer, John P. Grady, Robert V. Lewis, D. Richard Baronian, Bertram H. Buxton, Jr., Joseph E. Caruolo, George V. Coleman, John A. Dillon, Joseph D. DiMase, Joseph L. Dowling, Jr., Donald P. Fitzpatrick, Milton W. Hamolsky, Henry M. Litchman, Peter L. Mathieu, Jr., Samir G. Moubayed, P. Joseph Pesare, Ralph F. Pike, Richard P. Sexton, George H. Taft, Wilson F. Utter, Seebert J. Goldowsky, William J. MacDonald, and John J. Cunningham.

Delegates absent were: Drs. J. Douglas Nisbet, William J. O'Rourke, Frederick Peirce, Jr., Robert Fortin, Paul J. M. Healey, Mary-Elaine Rohr, A. John Elliot, Louis Morrone, Francis L. Scarpaci, J. Gerald Lamoureux, A. A. Savastano, Nathan Chaset (ill), Dominic L. Coppolino, Herbert Ebner, Martin E. Felder, Martin Feldman, David Freedman (ill), Edward J. Gauthier, Constantine

S. Georas, Frank Giunta, Charles L. Hill, John B. Lawlor, Vincent I. MacAndrew, Raul Nodarse, James A. Reeves, Robert P. Sarni, Guy A. Settignano, William R. Thompson, Armand D. Versaci, Elihu S. Wing, Jr., Joseph E. Cannon, and Arnold Porter.

Commissioners in attendance were; Drs. Leonard S. Staudinger, Thomas F. Head, and Richard P. Sexton.

Commissioners absent were: Drs. Kenneth Liffmann and Frank W. Sullivan.

Specialty Society representatives in attendance were: Drs. Henry M. Litchman, David Hallmann, Wilson F. Utter, Patrick A. Broderick, Arthur I. Geltzer, and Joseph E. Caruolo.

Specialty Society representatives absent were: Drs. John D. Pinto, Daniel B. Massouda, Charles E. Millard, Hector Jaso, William F. Varr, Richard Peters, Bencel L. Schiff, Guy A. Settignano, Charles L. Hill, and David M. Barry (ill).

* * *

SPEAKER'S ADDRESS CONTINUES

According to the Rules and Bylaws of the Society, 20 delegates shall constitute a quorum and that number is present.

One of the prerogatives of the Speaker of the House is to address the House of Delegates at the opening of each meeting as to matters of conduct and procedure in the House.

The chair will utilize Roberts Rules of Order in the Newly Revised Edition, rather than some of the older or abridged editions. The chair plans, by utilizing the principle of unanimous or general consent to speed up the disposition of many routine matters. This principle will give the chair latitude to dispose of quickly, without a motion, those matters not likely to engender dissension and debate. However, the chair will not be offended, if at any time a member objects, and requests the more time-consuming method involving a motion, a second, debate, and vote, in order to record into the minutes the more accurate division of the House.

The House usually meets in September and in January, and with an annual meeting in March. The latter is often held on the same day as the annual meeting of the Blue Shield Corporation.

(Continued on page 471)

Rhode Island Physicians Aid Block Island Residents

By Edward J. Lynch

Thirteen Rhode Island physicians, including 12 medical doctors and one osteopathic physician, recently filled a huge medical gap when it was learned that Block Island had suffered the loss of its only resident physician and was without adequate medical care.

In early January of this year, Dr. Robert L. Conrad, Chairman of the Emergency Medical Services Committee of the Rhode Island Medical Society, read in a local newspaper of the plight of Block Island citizens who were bereft of a doctor who could care for their medical needs. It was also pointed out by the newspaper that the Block Island Town Council was facing a difficult situation in obtaining the services of another qualified medical practitioner on the island.

Because this situation involved emergency care in a part of Rhode Island, Doctor Conrad called Mr. William Transue, Chairman of the Physicians Search Committee on the Island, to determine whether some type of part time medical assistance could be feasible until a regular resident doctor could be obtained. The citizens of Block Island through their administrative offices expressed their view that they would appreciate any medical help that could be secured.

Doctor Conrad arranged a meeting with the

EDWARD J. LYNCH, of Barrington, Rhode Island, Assistant Executive Secretary, The Rhode Island Medical Society, Providence, R. I.

members of the Block Island Town Council, and he flew out to the Island to survey the medical facilities and to evaluate what type of medical program could be established.

Since Doctor Conrad is a member of the Washington County Medical Society, which is the closest organized medical organization to Block Island, it was felt that physician volunteers could be obtained from this organization of doctors to provide some type of partial coverage.

The proposed program for medical help for the people of Block Island was announced at both Westerly and South County Hospitals. Several physicians immediately offered their personal service while several others accepted an active role in the program after the critical need was explained to them. Both general practitioners and members of various specialty groups were asked to do family practice on the Island by covering four out of seven days per week. A schedule was thus created by Doctor Conrad to provide this interim coverage and a nurse secretary was named to arrange appointments for the people of Block Island. If the people knew that a physician representing a specific specialty would be coming to the Island, that specific type of medical problem would be directed to the physician on his appointed day.

In a cooperative spirit, the Town Council of Block Island subsidized transportation to the Island (whether by air or sea). The Council members also provided living accommodations and



FIGURE 1.

meals for both the physician and his wife if they wished to make a brief vacation trip to the Island. The various doctors covered the Island from as long as one week to a few days or to a single day at a time going back and forth by airplane. Routine office visits were maintained while the doctor was on the Island. Several emergencies also occurred while the recruited physicians were on the Island which required suturing of lacerations and other emergency procedures. Some emergency cases required air ambulance transfer from the Island to the mainland.

The program was an unmitigated success. The grateful citizens of Block Island recently arrived at the Emergency Room of South County Hospital to express their appreciation to Doctor Conrad and the other 12 physicians who offered their personal assistance when it was needed. The people of Block Island presented Doctor Conrad with a four-page multi-colored hand written poster, autographed with the names of many of the people of Block Island to whom the physicians had rendered medical care. (Please see Figures 1 and 2.)

GEE,
YOU
DOCTORS
SURE
WERE
SWELL!!
THANK YOU
THANK YOU

FIGURE 2.

A personal letter of appreciation was also sent to each physician by the President of the Town Council.

Participating in the program at Block Island, besides Doctor Conrad, were: Roger Ashley, M.D., Mauricio Golberg, M.D., George S. Hambly, M.D., John J. Walsh, M.D., J. Merrill Gibson, M.D., Thomas Nestor, M.D., John D. Pinto, M.D., Alfred Gobeille, M.D., John P. Wood, M.D., and A. John Elliot, M.D., all of the Washington County Medical Society; Anthony J. Migliaccio, M.D., of Providence, and Lawrence E. Bouchard, D.O., of Narragansett.

Since the time of the initial medical difficulty, Dr. Charles Cornbrooks has been appointed by the Island's community to oversee their medical needs. While Doctor Cornbrooks is the resident physician, Doctor Conrad has established a current coverage system to ease the constant medical treatment load which Doctor Cornbrooks carries. This backup system, constantly monitored by Doctor Conrad, gives both the citizens of Block Island and their new resident doctor greater confidence in ascertaining that their medical needs will not go unmet.



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Book Reviews

THE FIRST FIVE YEARS. A Relaxed Approach to Child Care by Virginia Pomeranz, M.D., with Dodi Schultz, Garden City, New York, Doubleday & Company, Inc., 1973. \$6.95

This book was written for mothers. It is packed with good, sound, common-sense, advice. Doctor Pomeranz is a practicing physician of 20 years and evidently knows her subject. She teaches that the best mothers are happy, relaxed, and unafraid. All pediatricians will agree with almost everything in the book.

However, there are two moot points. She writes that nursing mothers must take a quart of milk daily unless they find it quite repulsive. That amount is probably bad for the waist-line, and possibly the heart, and would take some of the fun out of nursing. It is questionable whether as much is necessary. After all, the cow does a good job without any.

The other concerns the question of over-feeding. She says that it is impossible to over feed a baby; that he will eat only as much as is good for him. Most young animals, except cats, will stuff themselves if given the chance, and that is probably true of some human babies. In many animals, this has been shown to shorten life. There may be a connection between overfeeding in infancy and the early occurrence of coronary disease. Over feeding is probably bad at any age.

This little volume is very readable, often amusing, and all mothers will find it helpful, interesting and enjoyable.

HAROLD G. CALDER, M.D.

* * *

IS MY BABY ALL RIGHT? A Guide to Birth Defects by Virginia Apgar, M.D., and Joan Beck, Illustrated by Ernest W. Beck, New York, Trident Press, 1972. \$9.95.

This book of nearly 500 pages is really excellent. Doctor Apgar now directs the medical program for the National Foundation — March of Dimes. Miss Beck is a well known writer. They say that the book is intended for "parents, families, students, and everyone who cares intelligently about the quality of family life". However, the ordinary physician, who sees children, will find here all he needs to know about embryology, genetics, neonatal injury, all the common birth defects and family counseling. It is not intended for the genetic specialist and all the great number of defects, most of which are very rare, are omitted.

(Continued on page 447)

RHODE ISLAND MEDICAL JOURNAL

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

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and children, particularly children, excessive doses may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular disease or hypertension. Until the patient's condition has been determined, no should be retained during ongoing operations requiring alertness, such as driving an automobile, operating machinery, etc. Patients receiving an anesthetic would be warned against possible additive effects with CNS depressants.

overalls, alcohol, hypnotics, sedatives, tranquilizers, etc.

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Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

Ⓜ Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

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BOOK REVIEWS

(Concluded from page 446)

The defects which are fully treated include sickle cell anemia, birth marks, cerebral palsy, chromosome abnormalities, cleft lip and palate, club foot, cystic fibrosis, diabetes, deafness, congenital heart defects, hemophilia, dislocation of the hip, hydrocephalus, inborn errors of metabolism, mental retardation, minimal brain dysfunction, PKU, pyloric stenosis, RH disease, rubella, short stature, spina bifida, congenital syphilis, tumors, and vesical defects. There is a good chapter on how to prevent defects with plans for the future.

One of the best is on family counseling.

A charming feature of the book is the frequent introduction of short case histories intended to illustrate the subject or to aid the parents in adjusting to a difficult situation and sometimes to give hope that the defect can be overcome. For example, they include the story of Christy Brown who is so handicapped by cerebral palsy that he is unable to dress or feed himself. He has complete use of only his left leg. Yet he wrote a popular novel by typing one letter at a time with his left little toe.

Genetics is a relatively new and growing field, and most doctors not actively concerned with it should keep up to date. There is no book better qualified to do this.

It is strongly recommended

HAROLD G. CALDER, M.D.



BOOKS RECEIVED FOR REVIEW

(Continued from October, 1973 Issue)

THE FIRST FIVE YEARS. A Relaxed Approach to Child Care by Virginia E. Pomeranz with Dodi Schultz. Garden City, Doubleday & Company, Inc., 1973. \$6.95

YOUR PROSTATE. What It Is, What It Does, and the Diseases That Affect It by Robert L. Rowan and Paul J. Gillette. Garden City, Doubleday & Company, Inc., 1973 \$5.95

THE EXPECTANT FATHER. A Practical Guide by George Schaefer. New York, Barnes & Noble Books (Division of Harper & Row), 1972. Reprint of original edition published by Simon and Schuster, 1964. Revised. \$1.95

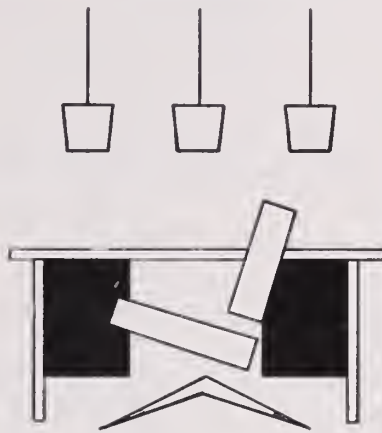
DR. THOMPSON'S NEW WAY FOR YOU TO CURE YOUR ACHING BACK by Jess Stearn. Garden City, Doubleday & Company, Inc., 1973. \$7.95



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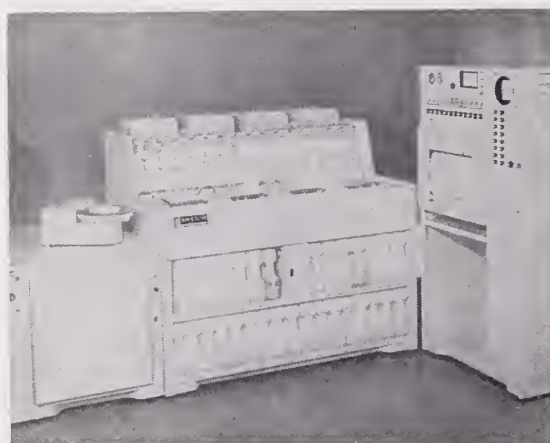
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Peripatetics

The largest number of surgeons in the history of the American College of Surgeons were recently inducted as new fellows. Included are FRANCESCO CANNISTRA, ALEXANDER M. CALEDA, LELAND W. JONES, ROBERT S. L. KINDER, RICHARD L. TESTA, JACK M. MONCHIK, and DOMENICO A. DiDONATO.

* * *

The following Rhode Island physicians among others attended the meeting of the American College of Surgeons: FIORINDO A. SIMEONE, ROBERT CONRAD, CHARLES ROUND, CHARLES ASHWORTH, JOSEPH E. CARUOLO, EUGENE HEALEY, PAUL HEALEY, FRANK LOGLER, HAYES CLUXTON, KENNETH LIFFMANN, RICHARD PERRY, MARTIN FELDER, SEEBERT J. GOLDOWSKY, ABRAHAM HORVITZ, JAMES YASHAR, LEONARD STAUDINGER, THOMAS PERRY, THOMAS RANDALL, RICHARD DYER, WILLIAM THOMPSON, ROBERT RIEMER, BRIAN DORMAN, GEORGE COOPER, and DAVID BARRY.

* * *

TIM NORBECK, Executive Secretary, and TED LYNCH, Assistant Executive Secretary, were guests of the Washington County Medical Society at a recent meeting at the Elm Tree Inn in Pawcatuck, Connecticut.

* * *

WILLIAM MINER has been named Executive Board chairman of Save the Bay, an environmental group. ANTHONY CHATOWSKY, a psychiatrist on the staff of the Newport Hospital, was elected to the Executive Board of the same organization.

* * *

HENRY T. RANDALL will be the Chairman of a post-graduate course on Fluids and Electrolytes at the Spring meeting of the College of Surgeons March 25-28, 1974 in Houston, Texas.

* * *

A new addition to the Medical Staff at Kent County Memorial Hospital is STEPHEN P. BURNS. Doctor Burns has been added to the Radiological team which includes Chief JOHN M. VESEY, THOMAS E. HUNT, VERDAT ERBUG, and NAPOLEON C. MATUCAN.

* * *

Three members of the Society were instrumental in arranging a Neuro-Radiological Conference at the Memorial Hospital in Pawtucket recently. The

doctors are DAVID HALLMANN, Radiologist-in-Chief at the Memorial Hospital; RICHARD LAND, Director of Radiology at St. Joseph's Hospital, and DAVID BARRY, Neuro-Surgeon-in-Chief at the Memorial Hospital. The speaker was WILLIAM SCOTT, of the Department of Radiology at the Massachusetts General Hospital and Harvard Medical School.

* * *

ROBERT P. McCOMBS has been named Director of Continuing Medical Education at the Memorial Hospital in Pawtucket. He will serve the hospital part-time as a teacher in Internal Medicine and an adviser in educational matters and as a medical consultant. He is presently a Professor of Medicine at Tufts University School of Medicine.

* * *

ERIC DENHOFF has been appointed Clinical Professor of Pediatrics at Brown University.

* * *

MELVIN HOFFMAN, President of The Miriam Hospital Staff Association, was appointed Chairman for the Subcommittee on Reaffiliation of the American Heart Association. Doctor Hoffman will chair the on-site team visiting the southern region of the American Heart Association.

* * *

BERTRAM SELVERSTONE discussed cerebral aneurysms in a talk at the annual meeting of the Neurosurgical Society of America in Bermuda recently. Also present at the meeting was MARION WITOSZKA who discussed "Central Nervous System in Hemorrhagic Shock (Metabolic Changes)".

* * *

ARVIN S. GLICKSMAN is the new chairman of the Department of Radiation Therapy at Rhode Island Hospital as of July 1. He also serves as professor and chairman of the Department of Radiation Medicine at Brown University. His associate is BANICE WEBBER, who formerly practiced general surgery in Providence, but is now a specialist in radiation therapy. The department hopes to publish a series of papers in this Journal.

* * *

LEO STERN, who was appointed as chief of pediatrics at Rhode Island and Providence Lying-

In Hospitals last November, assumed his duties here July 1.

* * *

EUFROCINO BELTRAN has been elected president of the Butler Hospital Medical Staff Association. WILMA ROSEN is the association's new vice president; ROBERT FOWLER, secretary-treasurer; and JOSEPH BARUCH and HENRY IZEMAN are counsellors-at-large.

* * *

RONALD R. RICCO has been named Obstetrician-in-Chief at the Memorial Hospital in Pawtucket. Doctor Ricco joined the staff of the hospital in July, 1970.

* * *

A new Alcohol Treatment and Education (ATE) Unit opened recently at Glendale Adventist Medical Center, Glendale, California. The new unit will be under the direction of LAURENCE SENSEMAN, former chairman of the Mental Health Committee of the Society.

* * *

RICHARD McDERMOTT and DONALD KAUFMAN of the Gastroenterology Division captured top honors at the 18th Annual Scientific Assembly held at Rhode Island Hospital. Doctor McDermott, assisted by Doctor Kaufman, evaluated the clinical picture of patients with acute hepatitis B (serum hepatitis) and assayed blood for the presence of the associated antigen during the convalescent period. Doctor Kaufman's paper on the subject took first place in the clinical division.

In the research division, Doctor McDermott's abstract won first place. He outlined the search for two subdeterminants of the hepatitis associated antigen which may be useful in predicting chronic antigenemia in hepatitis patients.

* * *

ROBERT P. DAVIS, Physician-in-Chief of The Miriam Hospital, participated in a post graduate course on "Management of Acute Respiratory Failure" at the 122nd Annual Convention of the American Medical Association on June 23, in New York. Doctor Davis lectured on "Acid Base Disorders in Pulmonary Diseases".



Physicians Seek Opportunities In Rhode Island

Thomas P. Laughren, M.D.
The University of Wisconsin
Department of Psychiatry
1300 University Avenue
Madison, Wisconsin 53706
Psychiatry

* * *

Chen F. Lian, M.D.
Assistant Professor
Yale University
Yale-New Haven Hospital
789 Howard Avenue
New Haven, Connecticut 06504
Radiology

* * *

Mohamed-Gous Patel, M.D.
11691 Archdale
Detroit, Michigan 48227
Obstetrics and Gynecology

* * *

Paul Mayer, M.D.
143 Green Acres Drive
Burlington, Vermont 05401
Internal Medicine

S. A. Haleem, M.D.
146 Kneeland Avenue
Yonkers, New York 10705
Urology

* * *

Ratnakar Andalkar, M.D.
11 Amherst Street
Biddeford, Maine 04005
General Surgery

* * *

George D. Tedesco, M.D.
Vanderbilt University Hospital
1161 21st Avenue
Nashville, Tennessee 37203
Anesthesiology

* * *

Sirous Arijia, M.D.
2218 Inwood Drive
Huntington, West Virginia 25701
General Surgery

* * *

Michael E. Bohan, M.D.
57 Sargent Road
Swampscott, Massachusetts
Internal Medicine

* * *

Samir R. Neimat, M.D.
815 Southlawn Drive
Iowa City, Iowa 52240
Cardiovascular Surgery

* * *

Carlos Ramirez, M.D.
44 Broadlawn Park
Chestnut Hill, Massachusetts 02167
General Surgery

* * *

Donald J. Thomson, M.D.
Fitzsimons General Hospital
Department of Neurology
Denver, Colorado 80232
Neurology

* * *

Moon W. Song, M.D.
200 Carman Avenue
Apartment 10 C
East Meadow, New York 11554
Obstetrics and Gynecology

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* * *

Jeffrey T. Klein, M.D.
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Donald C. Martin, Jr., M.D.
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University of Pennsylvania
The Graduate Hospital
Philadelphia, Pennsylvania 19146
General Surgery
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Ronald F. Sural, M.D.
The Ohio State University Hospitals
410 West 10th Avenue
Columbus, Ohio 43210
Urology
* * *

Shin E. Kim, M.D.
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301 St. Paul
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URINEX: URological INFORMATION EXtraction; An Automated History-Taking System For Urological Diseases

*System Provides An Effective Liaison
Between Physician And Patient*

By Elliot M. Perlman, M.M.S., W. S. Klutz,
M.D. and Peter A. Stewart, Ph.D.

When the idea first arose to utilize computers in clinical medicine, optimism among computer engineers ran rampant. Physicians would be obsolete in 10 years, and the AMA would be taken over by IBM! "Computer Program Seeks to Diagnose All Man's Diseases", promised a NEW YORK TIMES article in 1966.¹

Now that the initial fervor has subsided, it has become increasingly apparent "... that what is easy for the computer may be difficult for man, and what is easy for man may be extremely difficult for the computer". Representative of this

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PETER A. STEWART, Ph.D., *of Providence, Rhode Island, Professor, Section of Physiology and Biophysics, Division of Biological and Medical Sciences, Brown University, Providence, R. I.*

Based on a thesis submitted by Elliot M. Perlman in partial fulfillment of the requirements for the Master of Medical Sciences degree, June, 1971, Brown University.

enlightened attitude is an excellent review article by Barnett², in which seven current topics in medical computer usage are discussed: clinical laboratory, patient monitoring, hospital information systems, patient screening, automated medical history, medical records, and medical diagnosis. The URINEX (URological INFORMATION EXtraction) System presented here involves the last three topics. The system obtains a detailed urological history directly from the patient, prints this history in a readable outline form for the physician, and then makes a limited differential diagnosis.

GENERAL DESCRIPTION OF THE URINEX SYSTEM

In the URINEX System the patient participates in an interactive dialogue, the machine portion of which is produced on a cathode ray screen connected to a computer (Figure 1). The system displays on the screen a series of questions similar to those normally presented to a patient by a physician taking a typical urological history (Figure 2). Included are the usual identifying data questions, (such as name, age, race, and religion), a detailed series of urinary history questions, and a brief system review section.

(Continued on next page)

The patient answers questions by using a light-pen and a typewriter keyboard. The system is an interactive one, and the sequence of questions which appears on the screen is largely dependent on the answers the patient gives. In most questions a single answer is selected from two or more possible choices, but, where it is appropriate, more than one of these choices may be selected by the patient. Occasionally diagrams may be presented instead of verbal questions (Figure 1). The program gives the patient as much time as he desires on any question and also allows him to correct errors he has made. The patient cannot go on to the next question without answering the previous one. When he finishes answering a question, it usually disappears from the screen and is immediately replaced by another one. Occasionally, however, an answered question may remain on the screen if it is pertinent to the questions which follow.

When the patient completes the entire set of questions (which may range from about 40 to 130 questions), the machine punches out nine cards, which contain some alphabetic information and



Fig. 1
Patient taking computerized interview.

200 single-digit integers. These integers are the entire history in coded form.

Utilizing the numerical data on the cards, the system can then formulate a history summary which closely parallels the standard recommended

SAMPLE QUESTION SEQUENCE

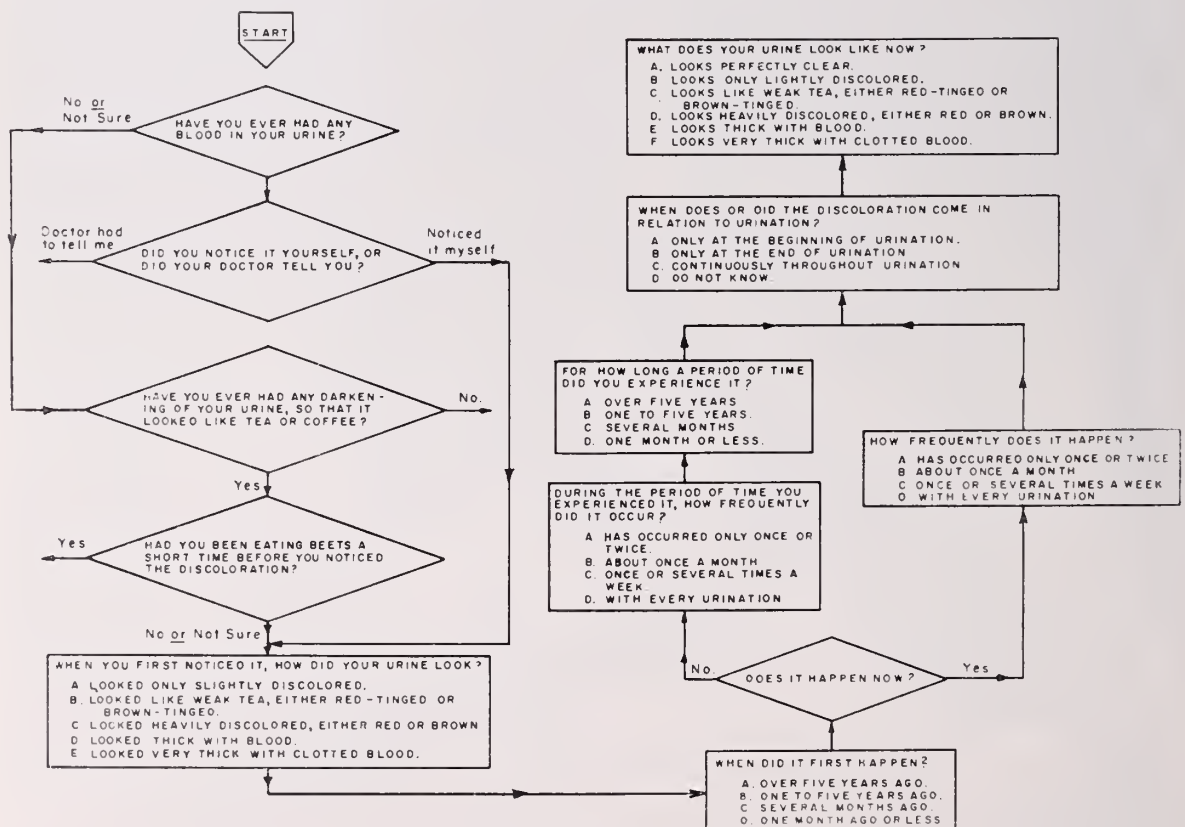


Fig. 2.
A sample sequence of questions from the computerized interview.

UROLOGICAL INFORMATION EXTRACTION PART 1 — HISTORY SUMMARY

September 14, 1970

Name —

Identifying Data —

The patient is a 66-year-old White Catholic male.
He is married. His weight is 200 pounds.

PRESENT ILLNESS

NOCTURIA

Began — Several months ago.

Frequency of Occurrence — Every time the patient sleeps.

Description —

Awakenings Per Sleep — About every hour.

BURNING SENSATION IN ABDOMINAL OR PELVIC AREAS

Began — Several months ago.

Frequency of Occurrence — Once every day, or more.

Description —

Locations — In the bladder area.
Lower right quadrant.
Lower left quadrant.
Suprapubic area.

Severity — Moderate.

Effect of Urination — Increases discomfort.

Length of Attacks — Seconds.

Fever, Sore Throat Concurrently — No.

No Chills.

RETENTION

Began — One month ago or less.

Frequency of Occurrence — Has occurred only once or twice.

Description —

Catheterization History — Yes.

Fig. 3

The identifying data and part of the present illness section of the history summary, as compiled and printed out by the computer.

UROLOGICAL INFORMATION EXTRACTION PART 2 — DIFFERENTIAL DIAGNOSIS

September 14, 1970

NAME —

IDENTIFYING DATA —

The patient is a 66-year-old white Catholic male.
He is married. His weight is 200 pounds.

DIAGNOSIS

PROBABILITY

Benign prostatic hypertrophy	0.99561
Carcinoma of the Prostrate	0.00342
Acute pyelonephritis	0.00095
Carcinoma of the bladder	0.00000
Acute glomerulonephritis	0.00000

Fig. 5

The differential diagnosis, calculated by the computer, is printed out along with the identifying data.

history format (Figures 3 and 4). Included are an "identifying data" section, a "present illness" section, and a "past history" section. The identifying data section is in concise sentence form. The present illness and past history sections present in outline form all of the symptomatology obtained in the history. The final portion of the summary is the "negative history" section, which lists all

PAST HISTORY

HEMATURIA, GROSS

Began — One to five years ago.

Duration — One month or less.

Frequency of Occurrence — Has occurred only once or twice.

Description —

Urine first looked like weak tea, either red-tinged or brown-tinged.

When During Urination — Patient does not know.

Urine now looks perfectly clear.

NEGATIVE HISTORY

No frequency of urination

No enuresis

No incontinence

No pain in abdominal or pelvic areas

No fever or sore throat associated with urinary problems

No constipation associated with onset of urinary problems

No diarrhea associated with onset of urinary problems

No hemorrhoids

No renal calculi

No history of serious injury to abdominal or pelvic areas

No nausea associated with urinary problems

No vomiting associated with onset of urinary problems

No headache associated with onset of urinary problems

No edema associated with onset of urinary problems

Fig. 4

Portions of the past history and negative history sections of the history summary print-out.

of the negative findings.

After the history summary is printed out, the machine then uses the data on the same nine cards to decide which of five diseases the patient may have. This differential diagnosis is also printed out (Figure 5).

METHODS

The computerized history-taking program was written in Fortran IV, Level E, and utilized the Graphic Subroutine Package (GSP), a series of Fortran subroutines used for image generation and display on an IBM 2250 (Model 4) Cathode Ray Screen. The 2250 was connected to an IBM 1130 Computer. The program also required the single disk drive system normally used with the 1130.

The sequence of questions presented to the patient is based on an outline given by Campbell for a standard urological history. The questions were carefully written to ensure understanding by the patient. They are, for the most part, short and easily readable. The suggestions given by

(Continued on next page)

HISTORY TAKING PROGRAM

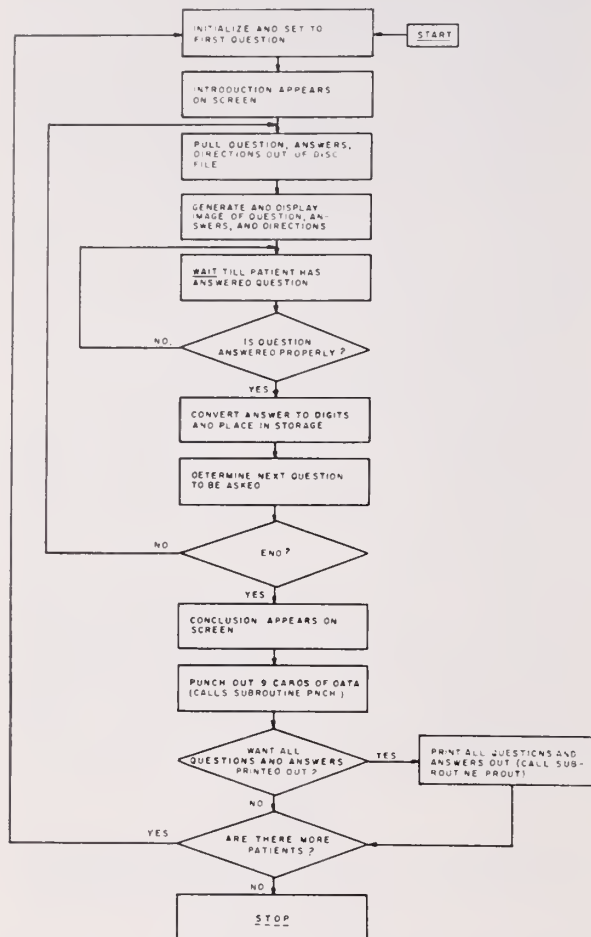


Fig. 6
Flow chart of the history-taking FORTRAN
program, HISTL.

Collen, et al.⁴ in their attempts to produce useful questionnaires have been closely followed. The questions have few limiting phrases, use precise words, and utilize quantifying phrases rather than vague descriptive terms such as "frequently" or "occasionally". The choice "I don't know" as an answer to a question has been used minimally in the system and only in those questions that absolutely require it. It was felt that in most questions, especially those relating to chronology, a guess would be much more informative than an "I don't know" response. Moreover, it was found through experimentation with "I don't know" as a choice that subjects were likely to choose this answer, rather than to rethink the question carefully. Figure 2 presents part of the question sequence to illustrate the type of questions used. Figure 6 is a flow chart of the entire history-taking program.

DIAGL PART I
HISTORY PRINT-OUT

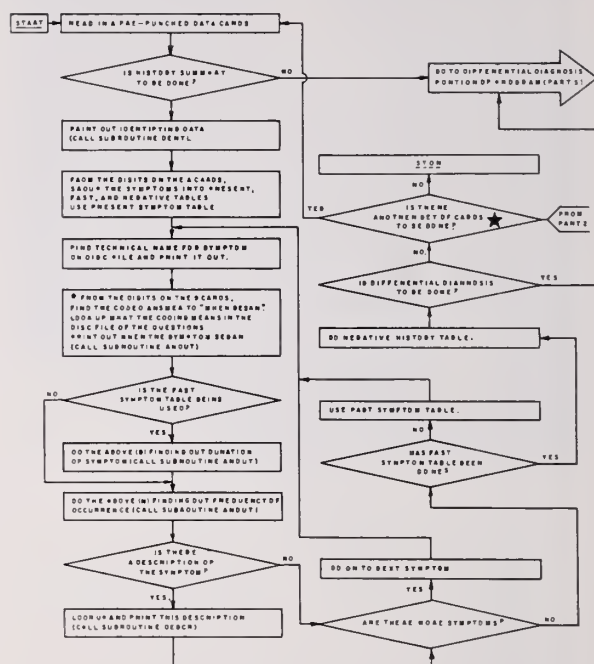


Fig. 7
Flow chart of history summary portion of the
FORTRAN program, DIAGL.

The results of this history-taking program are punched out on nine cards, as already indicated. These cards can then be used as input to a second FORTRAN program, called DIAGL, which prints out the history summary and then calculates diagnostic probabilities. Figures 7 and 8 present flow charts for the two parts of this program. Assuming that the patient has one of the diseases listed, the second part of this program calculates the probabilities of the patient's having each disease, and thus indicates the most likely diagnosis. The calculations are based on Bayes' theorem, in a manner similar to that described by Warner, et al.⁷

RESULTS

The URINEX System was tested on several patients from Roger Williams General Hospital in Providence, Rhode Island.. Because the URINEX System was operational only at the Brown University Computing Center, the patients had to come to the computer "interview" after their discharge from the hospital. They were asked to answer the questions as if it were the day of their admission to the hospital.

All instructions were provided by the system itself. The patients were initially slow and cautious in answering the questions, but within a few min-

DIAGL PART 2 DIFFERENTIAL DIAGNOSIS

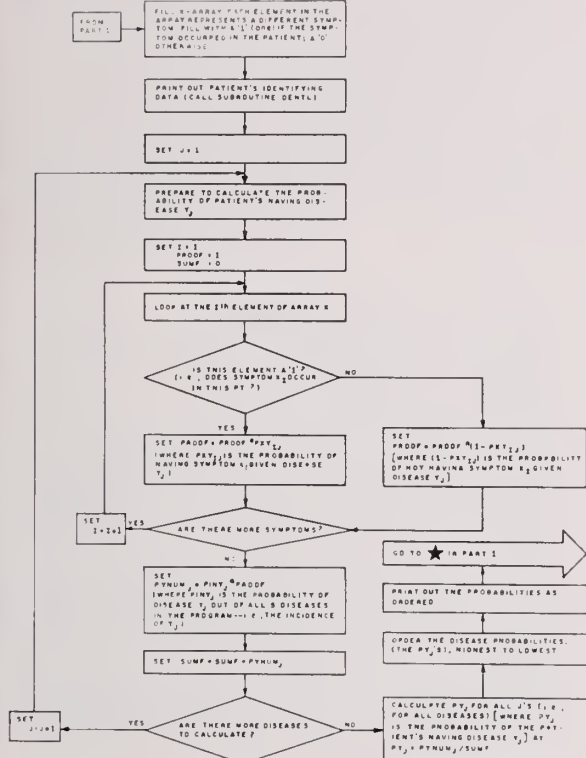


Fig. 8

Flow chart of the differential diagnosis portion of the FORTRAN program, DIAGL.

utes they became proficient at using the lightpen and typewriter inputs. All patients found the computer interaction interesting and enjoyable, and the whole procedure easy to do. They rated the questions sufficiently varied in format (e.g., the use of diagrams, or questions with multiple answers) to avoid monotony, but simple and concise enough to be readily understandable. Most patients who took the computer interview found the computer interaction equal to or preferable to a doctor's questioning. However, one patient who had been admitted to the hospital with fever, pain, and great discomfort felt that she would rather have spoken personally to a doctor while she was in such distress.

Several physicians were given the output of the computerized history-summary program to examine and criticize. They found the history summaries to be readable, concise, and informative. Moreover, all agreed that such a system has great practical value and could be readily incorporated into clinical practice, in either a clinic, a multiphasic screening unit, or in a physician's office.

DISCUSSION

The URINEX System demonstrates that a computer can successfully act as a liaison between the patient and the physician, posing questions to the patient in a language he can understand easily, and translating this information into a form the physician can use conveniently. A great deal of effort has been expended on this prototype system to ensure ease of interaction between patient and computer. Questions are concise and unambiguous, and use as simple a vocabulary as possible.

Of equally great importance is the emphasis placed on the computer-physician communication process in an attempt to bridge the "communications gap" that often exists between computers and clinicians. Computer output often is not designed with enough consideration given to this problem. Most physicians are not interested in sorting through reams of unfamiliar tabular data which somehow seems to characterize computer output. For this reason the URINEX System prints its output in a format with which the physician is familiar, using medical terminology and standard history organization and identifying data, present illness, past history, and negative findings. Finally, a list of diagnostic probabilities is presented.

While the specific differential diagnosis shown in Figure 5 for this prototype system is, of course, limited in its scope and its practical value, it is included to demonstrate the ability of this system to process medical data without the intervention of trained medical personnel. The diagnosis is made directly from the answers given by the patient himself; no data are entered by a physician or technician. This model system can readily interact with the patient, process and draw conclusions from information that it has obtained from the patient, and then communicate the results to the doctor.

Many types of useful medical data could be obtained efficiently from patients utilizing a similar interactive system. One of the most important yet often overlooked areas of history-taking is that portion concerned with general health habits, such as food idiosyncrasy, adequacy of diet, sleep regimen, weight changes, allergies, use of drugs such as aspirin and other patent medicines, and smoking and drinking habits (Slack, et al.⁵). Clearly, an automated system to obtain this type of information could be developed along similar

(Concluded on next page)

lines to URINEX. Moreover, family history and social history could also be readily documented and evaluated by such a computer "interview".

Although computer interactive histories are sometimes viewed askance by physicians because of the impersonality of the machine, it is often the case that patients feel more comfortable discussing certain intimate problems in this impersonal atmosphere. A well-developed interactive system might do a superb job, for example, in obtaining a sexual or menstrual history.

The applications of such automated systems in clinical medicine are numerous. The use of a questioning device such as the URINEX System in multiphasic screening projects would be extremely valuable. Efficient use of physicians' time, the need for precise records, and the necessity of presenting rapidly the same series of questions to numbers of patients are all paramount in operating an effective multiphasic screening center. Similar systems could also be utilized at hospital admissions, or in an office practice.

SUMMARY

URINEX is a computerized history-taking system. It displays to the patient a sequence of medical history questions on a cathode ray screen, and receives information from the patient via lightpen and typewriter inputs. After the patient has completed his "interview", the computer prints out a concise summary in a format resembling the standard medical history. It also produces a tentative differential diagnosis.

Patients "interviewed" by this system found the interaction interesting and the task easy to perform. Physicians were enthusiastic about the familiar format of the history summaries. The URINEX system thus acts as an effective liaison between the physician and the patient, and provides a useful model for exploring further clinical applications.

CONCLUSIONS

Many computerized medical history-taking systems are currently being tested, and some are actually being employed in patient care. This is one promising step toward solving the problem of providing adequate medical care to a great number of people. However, the accumulation of such large amounts of data will provide no benefits unless the information can be evaluated easily by the physician, who is ultimately responsible for patient care. In essence, information must flow

freely, not only between the patient and the computer, but also between the computer and the physician. The URINEX System is a successful experimental approach toward solving these problems.

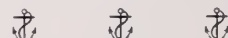
ACKNOWLEDGEMENT

We are indebted to Mrs. Carol Simmon for her competent and critical help throughout this work.

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Box G, Brown University
Providence, R. I. 02912

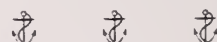
REFERENCES

- ¹The New York Times, September 25, 1966
- ²Barnett GO: Computers in patient care. *New Eng J Med* 279:1321-7, 12 Dec. 68
- ³Campbell MF, Ed: *Urology*. Second edition. Philadelphia, W. B. Saunders Company, 1963
- ⁴Collen MF, et al.: Reliability of a self-administered medical questionnaire. *Arch Intern Med* 123: 664-81, Jun 69
- ⁵Slack WV, et al.: A computer-based medical-history system. *New Eng J Med* 274:194-8, 27 Jan 66
- ⁶Sterling TD, Pollack SV: *Computers and the Life Sciences*. New York, Columbia University Press, 1965
- ⁷Warner HR, et al.: A mathematical approach to medical diagnosis. *JAMA* 177:177-83, 22 Jul 61



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1973-74 DIRECTORY

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The executive staff has made every effort to avoid mistakes in this publication, but if any member finds an error, please notify Mrs. Sciarra at the executive office at 331-3207.

The Teaching Hospital --- Who Needs It?

We Must Recognize The Needs And Wishes Of Patients, Of The Community's Doctors, Of The Academicians, Of The Entire Community

By Mitchell T. Rabkin, M.D.

Someone once said that a community hospital is interested in patients while the teaching hospital is interested in sickness. I don't agree.

What characterizes the teaching hospital is its relationship to the medical school, whereby certain standards — previously determined by the hospital alone — are now set by the hospital in conjunction with the medical school. For example, the presence of house officers, that is, interns and residents, and programs for their training and service, may fall for decision to both hospital and medical school. The complex issue of quality of care also becomes a joint concern. Definitions may be developed together on the process of medical care (what kind of work-up the patient will receive), how the care is to be documented in the medical record, the qualification of individual physicians, for instance, whether general practitioners should do major surgery or only Board qualified surgeons. Another joint interest is the hospital's educational

MITCHELL T. RABKIN, M.D., of Boston, Massachusetts, General Director, Beth Israel Hospital, Boston.

Read at the Annual Meeting of the Corporation of The Miriam Hospital, Providence, Rhode Island, May 8, 1973

program for its staff physicians, and the degree to which the staff must participate. Such matters provoke the development of standards and rules at the teaching hospital, deemed to be in the interest of patient care, but clearly pointing to meet both medical school and hospital needs as well as those of the patient. Other concerns become primarily those of the medical school, for example, the kind of student teaching to be done at the hospital, the number and distribution of students, the academic qualifications of those who will be doing the teaching. If it is a teaching hospital, the institution must have one eye on the bed and the other eye on the academic scene.

It must have more eyes as well, since the teaching hospital must also shoulder concern with societal problems that predispose to illness — public health matters such as lead paint and lead poisoning, or social and economic problems, such as housing so substandard as to breed ill health. Its interests are expected to go beyond the geographic bounds of its own roof, beyond the temporal bound of a patient's admission. It must be concerned with the care available for the discharged patient, and with the community's preventive efforts as well.

(Continued on next page)

Now the community hospital is generally smaller, with no house officers or very few — some foreign-trained and less independent generally than American interns and residents. There are usually no students and few if any full-time physicians, certainly no full-time physicians with the authority and responsibility of the teaching hospital Chiefs of Medicine, Surgery, or other specialties. In the community hospital, leadership comes from the Chief of Staff, a physician elected by his physician peers and therefore an individual whose status and power derive from the consent of his peers. The contrast in leadership is important: in the teaching hospital the Chiefs of Service are responsible to the Board of Trustees and to the medical school's Dean and the university's President. In the community hospital, the Chief of Staff, theoretically accountable to the Board of Trustees, is Chief only at the pleasure of his fellow physicians and thus has primarily accountability to them. I am making no value judgment on either of these arrangements, but I am simply pointing out a significant difference in a very complex comparison.

Many of the virtues of teaching hospitals apply to individual community hospitals — the concern for keeping up-to-date, for example, or the prudent use of advanced technology. What are the differences between the average teaching hospital and the average community hospital? There are some 200 to 400 teaching hospitals, depending upon one's definition. But there are some 6,500 community hospitals, and here the variations are considerable — variations in quality of care. For the most part, the public does not know where to rank its community hospitals individually. Care in many community hospitals can be and is of gratifying excellence. In terms of potential for the highest quality in medical care, however, the average teaching hospital has a distinct advantage over the average community hospital. It stands to reason that the best teaching hospital should be superior to the best community hospital, especially when the patient is very sick or his problems highly complex. The teaching hospital is larger. The latest in diagnostic and therapeutic technologies develop there, the advances in medicine are being made there. The potential for bringing to bear the most in know-how resides at the teaching hospital.

Of course there are qualifications to this flat-out judgment. The teaching hospital is more capable of dealing with the complex illness, the

rare diagnosis, the grave malaise that withstands conventional treatment, in short, the technologically challenging medical problem. But the very collection of such technical expertise in the teaching hospital cannot match the good community hospital for bringing the patient a feeling of warmth and personal attention. Regardless of its technical excellence or lack thereof, the community hospital has that certain humanity which meets important needs of patients, a personal warmth which emphasizes that we should not frame our future in terms of community hospital *versus* teaching hospital — we must draw upon the virtues of each and avoid their respective weaknesses.

There are two ways of combining those virtues. One is to instill into the teaching setting the warmth and humanity so characteristic of the community hospital. I can tell you from personal experience, that this is a necessary but never-ending struggle, given the size and organizational complexity of the teaching hospital. It requires both new ideas and persistent attention to old ones. At Beth Israel Hospital, for example, we have created the position of Hospital-Services Manager, an administrative representative who serves as the patient's personal agent in relation to non-medical and non-nursing matters — a dirty room, a broken windowshade, a misplaced diet tray. His task is both to meet the patient's immediate needs and to perceive whether the patient's complaint points out a systematic problem within the Hospital that requires identification and correction. We have put in a telephone hotline so that the patient in bed always has access to register a complaint and we have geared up the system to answer that complaint within minutes. We have special training courses for Dietary and Housekeeping workers, who may spend more time with the patient than do his doctors or his nurses. Other hospitals appoint ombudsmen or create other approaches to personalizing the teaching hospital experience.

The second way to bring the two sets of virtues together is to move the community hospital into the category of teaching hospital. To do so requires a dispassionate look at the process of change from community hospital to teaching hospital. We must first ask how willing we are to increase the technical quality of our medical care if it means a trade-off in the warmth and personalization of our service. Must we accept this trade-off as inevitable? I think not. I think it can be avoided.

There are other trade-offs that commonly we

don't talk about, trade-offs which I think are not so readily dealt with. For example, the change from community to teaching hospital represents not simply a change in the components of care that patients may receive, but more importantly the possibility of changes in the relationships among patients, their doctors from the community, and the doctors from the medical school. In the teaching hospital some doctors are appointed through the influence of the medical school, and they may be placed in the top of the hierarchy at the hospital. These academicians may be doctors that the community does not know, never even heard of, placed as Chiefs over other doctors that the community has known, loved, and thought highly of for years and years. Who are these new interlopers? A new Chief and his lieutenants may come in and have the right to establish rules for physicians who formerly had seemed to function rather well, according to the community, without any direction other than their own conscience and the collegueship of their peers in the community. The doctors in the community can become very uneasy with this change and their unhappiness will be shared by their patients. How do you deal with this? On the one hand, the status of the community physician is assaulted. On the other hand, there may be certain instances where the old order should change, as new goals appropriate to the teaching hospital are identified, subscribed to, and then grafted onto the enduring goals of the community hospital.

The success with which the medical school and the community hospital mingle their values depends upon the sensitivity of the people on both sides and their recognition and willingness to deal with such knotty issues. All physicians know that the world of health care is changing; few would be foolhardy enough to reject a relationship between medical school and community hospital in the hope of delaying such change. There are far greater challenges to us all — both academicians and practitioners — from the government and other third-party payors, outside agencies which increasingly want to determine quality of care, proper utilization of beds, criteria for admission, length of stay, condition for discharge. As physicians, we can no longer dig in our heels and declare self-righteously that, "doctor knows best". The doctor has been knocked off his pedestal by the forces which derive from the agencies that purchase medical care. He must become more and more a team player in the organization of medical care delivery, while

retaining his prime role in clinical diagnosis and therapy. And because such major social and economic changes are reshaping the practice of medicine, alliance with medical schools and the joining of teaching hospital and community hospital become increasingly an anchor to windward in a stormy world of medical care whose turbulence will increase for years to come.

I believe that community physicians appreciate the changes taking place in medical care and in its economics and social characteristics. And I believe that these doctors are not fundamentally resistant to change. The doctor in the community wants not to be rendered obsolete, not to be eased out of the capacity to practice, not to be summarily dismissed; he wants to do well for his patients. His hesitations and doubts, in the proposed evolution from community to teaching hospital, come from a realistic and appropriate concern, particularly on the issues of care where he has demonstrated his own effectiveness.

In this discussion I have deliberately stayed away from the role of the teaching hospital in training tomorrow's physicians and in developing new knowledge through research. It goes without saying that teaching and research are indispensable components of the teaching hospital, and they cannot be dismissed. But I think the issues of clinical care that we have just been examining may be closer to home for all of us this evening.

In summary, I think we can conclude that the teaching hospital is generally a better place to receive care than the non-teaching hospital; certainly it has far greater potential for excellence. It also has greater potential for depersonalization, for fragmentation of medical care, evils which require constant diligence to battle. The issue of teaching hospital versus community hospital is not that simply defined, and one must go beyond the superficial and probe the sociology of the institutions and the patterning of the individuals who make up and carry out the rules. No one answer is correct for all communities. It is up to each community to achieve its own best answer. To do so, we must put all the issues on the table, we must recognize the needs and wishes of patients, of the community's doctors, of the academicians, of the entire community. Only then will some headway be made that is worthy of our efforts to bring healing to those who suffer and continued learning to those who heal.



Evolution Of The Surgicenter

Interest In This Type Of Facility Exhibited Elsewhere Has Not Been Reflected In Rhode Island

By Charles L. Hill, M.D.

I should like to present some background information which may help in understanding our problem. As an ear, nose, and throat surgeon, I deal with patients ranging from those with complaints related to cosmetic deformities with no urgency for repair to those with life-threatening emergencies. I have been exposed to many of the problems in a general hospital from construction, to admissions, to record keeping, to operating room organization, to nursing care on the floors. I have lived with the frustrations of patients, hospital personnel, and physicians. My colleagues and I were concerned to note that a patient with a deviated septum used the same bed as a man with cancer of the larynx. The inequities of priorities as well as utilization of facilities led to further exploration of the problem. I am not so presumptuous as to believe that I know all of the problems, much less all of the answers related to the business of hospital administration. There are, however, areas of common concern, and I will mention them without comment at present. (Table 1.)

Further study of the admissions of the ear, nose, and throat; plastic; dental; and, to a lesser degree, gynecological and general surgical services reveals that up to 20 per cent of these patients

CHARLES L. HILL, M.D., of Providence, Rhode Island, practicing physician.

Presented by Invitation at the New England Hospital Assembly Conference, March 27, 1973

Table 1

- I. Cost of Care
 - A. Allocation of cost
 - 1. Construction and amortization
 - 2. Maintenance
 - 3. Administration
 - 4. Education
 - 5. Research
 - 6. Patient care
 - B. Source of Financing
 - 1. Private insurance
 - 2. Medicare and Federal Government
 - 3. State government
 - 4. Grants—public and private
 - 5. Individual
- II. Utilization of Facilities
 - A. Five-Day Week
 - B. Competition Amongst Health Delivery Systems resulting in duplication
 - C. Overcare (not overkill) partially due to present requirements of insurance carriers for in-patient care
- III. Utilization of Personnel
 - A. Status of R.N., L.P.N., B.S., Medical assistant, medical text, etc.
 - B. Apathy of House Officers and Visiting physicians to reduce in-patient hospital costs and accept innovation
 - C. Relative unfamiliarity of trustees with the overall problem of medical care delivery

could have been treated without need for post-operative hospital care. From this observation came the concept of developing a facility to care for those patients who required the sophistication and safety of the hospital operating room, but not the expensive postoperative care. This facility would, in effect, free desperately needed acute beds for those who truly needed them, and yet, if

properly run, would in no way compromise the welfare of the patient. It would also significantly reduce the waiting list for those patients scheduled for minor surgery. Our concept attracted national interest, but it became clear that development of quality control standards was essential. Excited by the opportunity of providing some alternatives in the health care field, we approached the Rhode Island Medical Society and the Rhode Island Department of Health to participate in developing standards for state licensing and control. The Director of Public Health submitted the concept to the Rhode Island Health Planning Council, not for development of regulations, but for their opinion as to the concept of providing private ambulatory surgical care on an in-and-out basis. The Council recommendation was to the effect that the idea was good, but that it should be implemented by the established hospitals. The request to a local hospital to run the Dudley Street Facility for a specified period of time as a pilot project was refused. Consultations with Rhode Island Blue Cross-Blue Shield were equally frustrating. We felt that the rationality of the concept would prove itself, and we therefore proceeded. The operating room was open to any physician on the staff of an accredited hospital, and he could do such procedures as he felt were medically justified and for which he had hospital privileges. Fortunately, most private insurers, CHAMPUS, and isolated Blue Cross companies did cover the cost. Physician interest was increased, but due to the withholding of coverage by Rhode Island Blue Cross and the State Welfare Department, the case load could not be built up to make the facility pay for itself. The physician investors lost over \$30,000 supporting an ideal, which it now appears must die in Rhode Island at least for the time being.

Interestingly, support nationally has been encouraging. The success of the Phoenix facility bears witness to the validity of the concept we espoused when backed by the community at large. Representatives from the Hospital Association of Virginia and independent hospitals about the country have visited the facility and studied our operation. Our problems in Providence have been three-fold. The most disastrous from our point of view has been the fiscal difficulties of Rhode Island Blue Cross and their fear of adding new benefits without seeking an increase in premiums. Secondly, the erection of a large new hospital-connected building ostensibly for ambulatory care has added to our

troubles. The most damaging problem initially was a distrust of us and our motives by our fellow physicians. Although endorsement was given a year after we opened by the Medical Society and Osteopathic Society Executive Councils, we have not been able to influence the Health Planning Council or Blue Cross to change their decisions. Although we have failed locally, there have been some satisfying accomplishments. We have shown that a return to the smaller, individually oriented, non-overnight facility is gratefully accepted by the apprehensive patient. The avoidance of emergency work in the facility allows a predictable schedule, which is appreciated by the staff and the patients. The efficiency of such an organization has been proven beyond our hopes. There are some interesting statistics released by the General Accounting Office of the United States Government following their investigation of our facility of the fall of 1972. The very few cases done at our facility had been the equivalent of two acute hospital beds at the Rhode Island Hospital. A conservative extrapolation indicates this to represent 2,160 patient days over three years with a saving to Blue Cross of over \$313,000.

I fully realize that the type of facility we suggest has an unfair financial advantage over the existing institutions. This is one of the problems we are trying to help the community leaders understand. A decision against innovation because of its financial threat to existing programs is a shortsighted view which refuses to face the basic issues. There must be a massive reevaluation of allocation of costs as well as coordination of the health delivery systems related to community needs, a true, unselfish integration of total health resources. I would hope to see general taxes paying for construction, education, and research, which certainly benefits the community as a whole, just as does support of the police or fire departments. Insurance, whether national or private, could then set premiums at a more realistic level to provide for the vast majority of low-cost illness. The hospital system evolved during a period when medicine was a true art. As care became more scientific and expensive, life, in fact, did develop a price tag for its continuance. Improvement is not to be gained by putting more money into existing delivery systems without expansion of less expensive alternatives.



AMA Activities Concerning Professional Standards Review Organization: Progress Report*

AMA Board Of Trustees Reports To 1973 Clinical Meeting On Its Most Recent PSRO Activities

Previous reports of the Board of Trustees presented a progress report of Association activities concerning Professional Standards Review Organizations (PSRO) through late June, 1973. This report summarizes Association activities from late June to October 12, 1973.

AMA ADVISORY COMMITTEE ON PSRO

The Advisory Committee met for the fourth time on July 28, 1973 in Chicago; for the fifth time on September 22, 1973, also in Chicago. During both meetings, the Committee task forces reported on their activities. Highlights of those reports follow:

Task Force on Rules and Regulations: Reported on its continuing review of sections of the PSRO law considered most urgently in need of clarification through the formulation of appropriate regulations. Following completion of that review, the Task Force will submit a document containing recommendations for regulations to the Advisory Committee. The Task Force emphasized that development of suggested model language has spurred active debate and has generated many questions regarding the effect PSRO may have on the preservation of high quality of patient care. The Task Force is addressing those questions.

Task Force on Structure and Organization: Presented to the Advisory Committee a preliminary draft report setting forth various elements which might be included in a PSRO structure. Consideration was given in the report to organizational structure, the types of committees and appeal mechanisms necessary, and the relationship of professional review to data systems. The Task Force also presented a set of sample Bylaws and Articles of Incorporation for consideration by the Advisory Committee as possible models for use by physicians in establishing a PSRO. Modifications suggested by the Advisory Committee are now being integrated into those model instruments.

*For more on PSRO, see editorial on page 467.

Report of the Board of Trustees to the House of Delegates at the Clinical Meeting of the AMA in December 1973.

Task Force on Guidelines of Care: Reported on its July 14, 1973 Invitational Conference on guidelines development which was sponsored for representatives of national medical specialty societies. Twenty-seven member organizations of the AMA Interspecialty Council sent representatives to the Conference. Almost total agreement was reached to utilize a format proposed by the Task Force for establishing criteria lists for diagnoses accounting for 75 per cent of their respective inpatient practices; the criteria lists will be developed by each national medical specialty society and will be channeled through the Task Force on Guidelines of Care. Also, the Task Force presented its definitions of the terms "norms", "criteria", "standards," "screening," and "guidelines," which were adopted by the Advisory Committee.

Task Force on Communications and Education: In response to its charge to develop a PSRO educational and communications program directed initially to physicians, institutions and organizations, the Task Force presented a recently developed audio slide presentation. The slide presentation, which briefly explains PSRO concepts and AMA activities in response to PSRO, will be made available for AMA Field Service Department use following modifications suggested by the Advisory Committee.

Task Force on Data Collection, Processing and Storage: Reported that accord was reached at its mid-July organizational meeting to focus Task Force efforts on: the development of a minimum data set to meet PSRO review requirements; the development of a consistent patient and physician identification system; the development of a uniform terminology system, and preservation of the confidentiality of patient medical information as an integral part of PSRO data collection, processing and storage functions. Also, the Task Force reported on its efforts to develop a glossary of terms associated with data systems, which it expects to present to the Advisory Committee by year's end.

Task Force on Models and Prototypes: Presented a final document describing a recommended interim PSRO prototype system containing the minimum elements deemed necessary in such a system. Those basic elements are: (1) criteria for necessity of admission; (2) criteria for length of stay; (3) criteria for quality of care; and (4) provision for evaluation and education. The Task Force will be reactivated following official PSRO area designation announcements by the Department of Health, Education, and Welfare, at which time it will address itself to specific prototype developments which meet the needs made apparent from area designations.

Task Force on Geographical Areas: As reported to the House of Delegates at the 1973 Annual Convention, the Task Force had previously recommended to the Advisory Committee that *each* state should be permitted to *option* of forming a state-level PSRO, if such is the preferred approach of the members of the medical profession in that state and it can demonstrate the capacity to discharge the responsibility. That recommendation did not urge that all states *select* this option — only that all states *have* the option. Recently, this view was essentially adopted by the National Professional Standards Review Council as its recommendation to the Secretary of HEW for his consideration in designating PSRO areas. The Task Force on Geographical Areas will be reactivated to offer its assistance in resolving any problems that may arise following official area designation announcements.

Task Force on Evaluation of Programs: Pending the actual implementation of the Professional Standards Review legislation (functioning PSROs), the Task Force has of necessity confined its activities to the development of protocols for evaluating (1) PSRO long-term goals and objectives (2) the efficiency with which individual PSROs operate and (3) the direct and indirect effects of a national system of PSROs on the total health care system in the United States. The Task Force has agreed that although provisions of the legislation relate to length and appropriateness of stay (which in the past have been interpreted as cost-containment measures), a primary role of the Task Force will be to assure that the importance of evaluating the effect of PSRO on *quality* of patient care is emphasized. The Task Force will be prepared to fully evaluate PSROs as they become operational.

The Advisory Committee, continuing its pattern of receiving information on various programs related to the implementation of PSRO, heard a joint presentation from representatives of the National Association of Blue Shield Plans and the Blue Cross Association. Essentially, the representatives stressed the need to minimize PSRO/carrier duplication of functions, and urged that medicine and carriers integrate their activities wherever possible to achieve maximum efficiency of PSRO operation. Additionally, the Advisory Committee heard a presentation from one of its members proposing the establishment of a nonprofit legal entity which would maintain an organized "Common Data Base" to be utilized by the medical profession and allied elements of the health care industry.

The next meeting of the Advisory Committee will be held on December 15, 1973, in Chicago.

AMA REGIONAL CONFERENCES AND PSRO NEWSLETTER

Six of a series of eight AMA sponsored regional invitational conferences on PSRO have been held. The series began on August 3-4, 1973 and will conclude in early November. The programs have been conducted by select faculty and each conference has included a schoolroom and workshop setting covering the law; the role of the medical society; institutional review; possible PSRO models; the role of the carrier; data collection, processing and storage; and criteria of care development. Response to the invitations has been good and the conferences have been well received by participants representing state and county medical societies; national medical specialty societies; state osteopathic associations; National Medical Association; American Dental Association; state hospital associations; state nursing home associations; Blue Shield and Blue Cross Plans; Health Insurance Association of America; and the Department of Health, Education, and Welfare.

Five issues of the AMA's newsletter *PSRO Report* had been released at the time of this report. The newsletter, which is intended to serve as a vehicle for communication of relevant information concerning PSRO to the leadership in medicine and allied health areas, is published on a flexible schedule so that its content will be as timely as possible. Currently, the newsletter has a distribution list of approximately 3,000.

(Continued on next page)

AMENDMENTS TO PSRO

At the 1973 Annual Convention the House of Delegates considered resolutions calling on the Association to publicize the deleterious effect PSRO could have on the quality of care. The House considered and adopted the following substitute resolution 49:

Resolved, That although it is recognized that repeal or modification of PSRO legislation ultimately may be required to preserve the high quality of patient care, the American Medical Association should oppose any facets of this current legislation which act to the deterioration of quality care, publicize such deleterious facets, and place highest priority on developing and pursuing appropriate amendments to preserve the high quality of patient care.

At this time, the PSRO law has not been implemented and there is every indication that the program will be extremely slow in developing. Substitute resolution 49 confirms the difficulty in pro-

posing amendments to a law which has no program substance to test its validity, when it states that "it is recognized that repeal or modification *ultimately* may be required to preserve the high quality of patient care". (*italics added*). However, the Board of Trustees is convinced that certain changes to the law even now should be sought and has instructed staff to develop these and to seek their implementation.

Further developments along this line as well as any other information which may be of interest to the House will be reported to the House at the 1973 Clinical Convention.

While the Board of Trustees is keenly aware of the PSRO program's harmful potential, it simultaneously recognizes its obligation to carry out the directive of the House: "That the American Medical Association should provide a dominant role of leadership in implementation of the PSRO program".



Uniform Coding System Of Hospital Discharge Data (Resolution 113)

AMA Board Of Trustees Responds Affirmatively To Rhode Island Resolution

At the 1973 Annual Convention, the House of Delegates adopted Resolution 113, which favored AMA support of the development of compatibility among coding systems of hospital discharge data, urged that the AMA actively seek to establish compatibility of diagnostic codes for such data, and requested the Board of Trustees and the Council on Medical Service to take steps to ensure AMA involvement, for report at the 1973 Clinical Convention.

Resolution 113 predicated several arguments as the rationale for the recommended establishment of compatibility.. These include:

- 1—A rapid proliferation of agencies and systems for the processing of hospital discharge data;
- 2—A predicted acceleration of proliferation as

the PSRO amendment of PL 92-603 is implemented; and

- 3—The establishment of national and regional norms, complicated by the existence of a number of diagnostic codes.

The Council on Medical Service and its Committee on Private Practice reviewed Resolution 113, and are fully in accord that problems inherent in the existence of multiple coding systems of hospital discharge data must be resolved. Compatible systems of terminology and coding are essential if computerization of vast amounts of medical data for a variety of purposes is to be achieved.

In the Council and Committee discussions, information was provided regarding work of the Task Force on Data Collection, Processing, and Storage of the AMA Advisory Committee on PSRO. The Task Force was reported to have recognized that the existing terminology, classification, and nomenclature systems are limited and serve limited

(Concluded on page 476)

Report G of the AMA Board of Trustees to the House of Delegates at the 1973 Clinical Meeting in December is response to Resolution 113 presented by the Rhode Island Delegation at the 1973 AMA Annual Convention in June, 1973.

Editorials

PSRO AND THE HOSPITALS

As of this writing, Rhode Island has not yet been designated a PSRO area, nor has a PSRO been selected. Rhode Island PSRO, Inc. is awaiting a signal from HEW before organizing. Its by-laws are written, but its board of directors and officers have not yet been chosen. When designated and once these steps have been taken, it will under the law assume responsibility for the effectiveness of utilization review and the quality of care within hospitals and skilled nursing facilities. Initially these activities will be directed to patients on Medicare and Medicaid.

The law provides that the PSRO may delegate its review functions to the individual hospitals if in its judgment they are being carried out effectively. Guidelines of effectiveness will probably be forthcoming eventually from HEW, although it's a good bet that the PSROs will be functioning before such guidelines are available.

What can the hospitals and their staffs be doing in the meantime to assure control of their own destinies? It is our belief, based upon a careful reading of the law, that the obligations of the hospital are clear and relatively simple.

To fulfill its responsibility respecting utilization review, the hospital will be expected to have an effective utilization review committee. Rhode Island hospitals are performing with increasing effectiveness in this regard. The future calls for a general tightening up of procedures and a realistic self-appraisal of performance. A new activity which lies ahead is pre-admission certification for elective admissions. This is a procedure which the hospitals and staffs should prefer to conduct on their own, rather than to have it done by an outside agency. The utilization review activities are directed primarily to cost effectiveness.

The second role envisioned for the hospital and its staff by the PSRO amendment is the assurance of the quality of medical care. This is in essence code language for medical audit. All hospitals in Rhode Island subscribe to PAS-MAP (Professional Activities Study — Medical Audit Program of the Commission on Professional and Hospital Activities of Ann Arbor, Michigan). This is the grist upon which the mill of medical audit grinds. A few Rhode Island hospitals have started medical audit programs. For the most part, however, hospitals in this state have been reluctant, hesitant,

or dilatory on this regard. It is something that must be done. It would be the better part of wisdom to learn the ropes and get under way. Establishment of a functioning and effective medical audit committee, the second of the two elements necessary for maintenance of independence by the hospitals, should not be delayed.

Physicians are trained to evaluate data, make judgments, and recommend courses of action. They function well in both utilization review and medical audit. It is the responsibility of the hospital administrations, however, to provide adequate back-up services. Without these the committees will languish. In utilization review the key person is a utilization coordinator, commonly, but not necessarily, a nurse coordinator. In medical audit the key person is a health data analyst, whose function it is to study the data both on his own and at the direction of the committee. Based on his studies he provides the committee with profiles and patterns of care, both with respect to good practice and aberrations and deficiencies. These studies enable the committee to determine where educational efforts are needed. Audit will fail if staff is not furnished with appropriate technical personnel. Smaller hospitals could share coordinators and analysts where the volume of admissions does not warrant full-time coverage for these functions. Hospitals would do well also to upgrade the job of medical record data abstractor.

Effective performance by the hospital utilization review and medical audit committee will not relieve the PSRO of its surveillance responsibility. It will probably conduct its own computer studies and analyses as well as carry out on-site evaluations.

The PSRO undoubtedly would very much prefer to delegate the daily utilization review and audit chores to the hospitals, but it is explicitly required by law to assume these functions when the individual hospitals fail.

The hospital medical staffs would be well advised, therefore, to perfect their utilization review and medical audit procedures and the hospital administrations to furnish their medical staffs with the necessary skilled assistance.

*For more on PSRO, see report on page 464.

CLAMS AND HEPATITIS

In this Ocean State, which is scarcely more than a rim of shore around Narragansett Bay, the eating of shellfish has long been a way of life. The local authorities have always been diligent in enforcing pollution standards affecting shellfish gathering. There are, however, inherent risks, compounded by illegal shellfishing in restricted waters. The eating of raw clams, as is well known, entails the risk of salmonella and other enteric contamination. While typhoid is not often encountered these days, viral hepatitis is an important and serious problem. It is well recognized that raw clams entail a special risk, but it is less well appreciated that the steaming of clams in the traditional way does not produce a sufficiently high and sustained temperature within the clams to deactivate the heat resistant virus.

It is ironical that proof of the inadequacy of steaming has come from Rhode Island waters in a roundabout manner by way of Grady Memorial Hospital in Atlanta and JAMA.

Alan O. Feingold¹ reported the following case in a recently published letter:

Report of a case — A 21-year-old male college student spent a weekend in early May 1971 on the Rhode Island shore with three other friends. They dug clams in an area of summer shore cottages. He ate these clams steamed and fried, but not raw. His companions ate them raw, as well as steamed and fried. About five weeks later abdominal epigastric pains developed, and after five days with appearance of dark urine, he became deeply jaundiced, lost appetite, had mild fever to 38.3 C, extreme

weakness, and generalized itching without a rash. Serum glutamic oxaloacetic transaminase level, 765; bilirubin level, 8.1; and alkaline phosphatase level, 1.9. He required no treatment other than bed rest at home. The jaundice cleared after 10 days, and health returned in three weeks. An initial seven-pound weight loss was rapidly regained. Two of the other three friends (all of whom had eaten raw clams that same weekend) developed jaundice and concurrently underwent similar episodes, with jaundice. Both had similar unremarkable courses. Family contacts received immune serum globulin prophylaxis, and no secondary cases occurred. Follow-up after one year revealed normal transaminase, bilirubin, and alkaline phosphatase levels.

These cases emphasize not only the risk of eating raw clams, but also the lack of protection afforded by steaming. The author points out that the first patient ate only steamed and fried clams. Since it is generally accepted that frying does effectively deactivate the virus, this accidental in vivo experiment apparently demonstrates that steamed clams may in fact transmit hepatitis. The two other subjects contracted hepatitis with the same incubation period partaking of the same batch of clams, raw, steamed, and fried.

Hence, from Rhode Island waters comes not only further proof of the dangers of polluted clams, but also of the inadequacy of steaming as a means of protection.

¹Feingold AV: Hepatitis from eating clams. *JAMA* 225:526-7, Jul 30, 1973

SURGEONS AND HEPATITIS

Doctor Sheilda Sherlock, Chairman of the Department of Medicine of the Royal Free Hospital, University of London, and an authority on hepatitis, has cautioned surgeons that they run the risk of contracting hepatitis in operating on infected patients. One prominent Rhode Island surgeon succumbed to an acute fulminating hepatitis following a finger prick while operating on a much transfused patient. Another, a victim of post-necrotic liver degeneration several years after an acute hepatitis, may have been similarly exposed.

Sherlock observed that cases of infection in surgeons following cuts and punctures in the operating room are well known. According to the literature, she notes, 35 per cent of all gloves are found to be ruptured at the end of an operation, while the incidence rises to 85 per cent for operations lasting over an hour. She has asked glove manufacturers to attempt to develop gloves that are less vulnerable, but this is obviously a difficult task. Wire sutures are a particular hazard, and should, she believes, be avoided. Their special properties, however, make them valuable in cer-

tain situations, although the advent of non-reactive plastic sutures may render them less essential in most circumstances.

With discovery of the hepatitis B antigen, a marker for the presence of virus in both patient and surgeon is now available. The fact that surgeons are contracting the virus from patients recently has been confirmed by this means.

Besides the well established modes of transmission by syringes, needles, and blood transfusions, Sherlock has probably unlocked another mystery of serum hepatitis by suggesting that mosquitoes can transmit type B hepatitis and probably help

perpetuate the reservoirs, particularly in underdeveloped countries. Toothbrushes, shaving brushes, or anything else that might transmit blood should also be suspect.

She admits that ultimately she does not have the answer for the protection of surgeons. "Try not to cut yourselves," she says, "and I don't have the answer to this. I think something will have to be done about giving better protection during operations."

A rather discouraging prospect, no doubt, but surgeons live daily with danger.



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Answer on Page 476



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Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

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Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdose; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

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HOUSE OF DELEGATES REPORT

(Continued from page 443)

The chair intends to begin the meetings promptly at the specified time, and requests your presence. The meetings usually exceed two hours, and at times may be quite lengthy. You are asked to read the handbook when it is mailed to you, and to bring it to the meeting.

According to the Rules and Bylaws of the Society, the composition of the House consists of voting members made up of: 1. the delegates elected by the component societies — each component society being entitled to elect one delegate for each 20 active members. 2. The current officers and the immediate past president. And to consist of *without power to vote*, unless also elected as a delegate, the following categories of members: 1. the members ex-officio, 2. the five commissioners, 3. the representatives of the specialty societies. It is anticipated that the House could presently consist of as many as 93 members.

Others in attendance may be committee chairmen, members of the society, members of the executive staff and invited guests.

The chair points out that the non-voting members have been disfranchised not from malice, but because of the principle of one man, one vote, and they are represented in the voting by the delegates. If it were otherwise, for example, certain of the surgeons would be represented by the delegates, and the representatives of at least two surgical societies, and perhaps a third.

While the Bylaws do not specify the prerogatives of the non-voting members of the House, the chair considers them, not without voice, and they are urged to participate in all matters of discussion and debate but will kindly refrain from voting, whether it be by viva voce, by show of hands, or any method that may be utilized.

There has not been general agreement as to the privilege of non-voting members in introducing and seconding motions. The House has the right to establish its own rules and if there is no objection, the chair will feel free to accept such motions from any member of the House on the presumption that if it has merit it should pass the vote of the delegates and officers, and if it does not have merit, it should be defeated.

The handbook tonight is lengthy because of the excellent work done by the various committees and the detailed reports by their chairmen. The chair has no intention in the conduct of these

meetings to overlook or to pass too hurriedly over these valuable reports. The members are urged to retain in their files, those reports and position papers that will serve them most in the months ahead.

The chair acknowledges the presence of the Assistant Executive Secretary, Ted Lynch.

The chair now recognizes President Edmund T. Hackman so that he may introduce our new Executive Secretary, Tim Norbeck, and to welcome any guests who may be present.

(Also present was William Baltaks, Regional Director of the American Medical Association.)

* * *

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the March meeting of the House had been printed and distributed by the Secretary.

Action: A motion was made, seconded, and voted that the minutes of the March 7, 1973 meeting of the House of Delegates be approved as presented.

(Continued on next page)

McLean Hospital announces

the opening of the McLean Hospital Children's Center, for the diagnosis and treatment of children of all ages with emotional and learning problems.

The Center offers inpatient, outpatient, full and partial day care, aftercare and emergency services. A staff of psychiatrists, pediatricians, neurologists, psychologists, social workers and other professionals work as a team to meet the various and special needs of each child.

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REPORT OF THE SECRETARY

The Speaker noted that the report of the Secretary was included in the handbook.

Action: A motion was made, seconded, and voted that the report of the Secretary be approved and placed on record.

REPORT OF THE TREASURER

Dr. John P. Grady noted that his report was included in the handbook for the meeting and discussed several portions of it.

Action: A motion was made, seconded, and voted that the auditor's report be approved and placed on record.

Action: A motion was made, seconded, and voted that the report of the Treasurer as a whole be approved and placed on file subject to audit.

RECOMMENDATIONS FROM THE COUNCIL

Dr. Stephen J. Hoyer was late (excused) for the meeting and in his absence, the Speaker presented recommendations from the Council. The following actions were taken:

1. *Benevolence Fund Trustee*

The House elected Dr. George W. Waterman of Providence for a three year term until 1976 as a Trustee of the Benevolence Fund.

2. *R. I. Society of Neurosurgery Representative*

The House approved of the request of the Rhode Island Society on Neurosurgery for a representative to the House of Delegates of The Rhode Island Medical Society.

3. *Library Building Repairs*

The Speaker noted that the Council had approved of the expenditure of \$22,000 to the Eastern Construction Co. for library building repairs, and that the financing mechanism must be determined by the House.

Action: After discussion of the issue, the House of Delegates on a hand vote of 16 to 11 agreed to finance this expenditure from the general fund.

4. *Bicentennial Health Fair in 1976*

The Speaker noted the Council had approved the concept of having the Rhode Island Medical Society sponsor a Health Fair to be held in conjunction with the Bicentennial Celebration in 1976, and that the proposed budget as prepared by Alden Advertising, Inc. was included in the handbook. Mr. Saul Fern of the advertising firm answered questions from members of the House concerning the proposed budget.

Action: After considerable debate, on a hand vote of 14 to 10, the House approved the assessment of \$31 for each member in order to finance this project providing that 50 per cent matching funds are received from the Rhode Island Bicentennial Commission.

The President was empowered to appoint an Ad Hoc Committee to implement the project. Dr. Seebert J. Goldowsky was commended for his assiduous efforts in bringing this project before the House of Delegates.

5. *Budget and Dues for 1974*

The House approved the proposed budget for 1974 and voted that annual dues be \$100 for active members in practice for more than one year and \$50 for members in the first year of practice.

REPORT OF THE AMA DELEGATES

The Speaker pointed out that the report of the Delegate and the Alternate Delegate to the AMA was included in the handbook.

Action: The action was made, seconded, and voted that the report of the AMA delegates be approved and placed on record.

COMMITTEE REPORTS

Action: A motion was made, seconded, and voted that the following Committee reports be approved and placed on record: Delivery of Medical Care, Drug Abuse, Medical Aspects of Sports, Physicians and Carriers Workmen's Compensation, Scientific Work and Annual Meeting, State Committee on Peer Review, Medical Economics, Maternal Health, Liaison Committee with Brown, Emergency Medical Services, Nursing, and Aging.

The Speaker commended Doctor John E. Farley for the thoroughness and scope of his five page report on Drug Abuse. He further noted that Doc-

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tor Caruolo be commended for his considerable efforts and those of his committee on the two medical care delivery reports.

Doctor Head suggested that the Governor's Task Force on Health Finance should give priority to investigate means by which insurance of the unemployed can be sustained.

Doctor Peter Mathieu discussed his written report on Social Welfare and made note of the contribution of Dr. P. Joseph Pesare in its preparation. The Speaker expressed the appreciation of the House for Doctor Matheiu's diligent efforts.

PSRO PRE-PLANNING GRANT

Dr. Edmund T. Hackman, Society President, brought to the attention of the House the possible availability of a \$30,000 grant from the Tri-State Regional Medical Program to assist the Rhode Island Medical Society in planning the Professional Standards Review Organization activities mandated under HR 1.

The President and the Executive Secretary, with legal counsel, advised that there was nothing in the PSRO law which prohibited a tax exempt State Medical Society from accepting these funds for use in developing and implementing a PSRO mechanism. The Society was advised by the Department of Health, Education, and Welfare and the Tri-State Regional Medical Program and legal counsel of the Society to accept these monies if they are available.

Action: A motion was made, seconded, and voted that the Council of The Rhode Island Medical Society be authorized to seek a \$30,000 grant from the Tri-State Regional Medical Program to reimburse the Medical Society for such expenses as may arise during the development and implementation of a state-wide Professional Standards Review Organization.

AMPAC-RIMPAC

The Speaker noted that the minutes of the last meeting of the AMPAC-RIMPAC were included in the handbook. Doctor Thomas F. Head emphasized the importance of this movement to the practicing physicians of Rhode Island and asked that the AMA Regional Representative, Mr. Baltaks, be permitted to speak to the issue.

Mr. Baltaks praised Doctor Cunningham for his efforts as RIMPAC Chairman in attaining the organization's greatest growth in its history. Mr. Baltaks also offered his services to discuss AMPAC activities at meetings of District Medical Societies.

The matter of double billing was discussed by the House and the President asked permission for the Woman's Auxiliary to include its annual dues on the same statement as those of the annual dues of the Society.

Action: A motion was made, seconded, and voted that the annual dues bill of the Rhode Island Medical Society include the statement of the Woman's Auxiliary as well as AMPAC-RIMPAC.

Doctor Hackman announced that a Diabetic Fair would be held November 3 and 4 at the Park View Junior High School in Cranston.

ADJOURNMENT

The meeting was adjourned at 10:25 p.m.

Respectfully submitted:

STEPHEN J. HOYE, M.D.

REPORT OF THE SECRETARY

Stephen J. Hoyer, M.D.

The Council has held three regular meetings and one special meeting since the previous meeting of the House of Delegates and the following constitute major actions taken:

1. Approval was given of the President's appointment of Toward S. Browne, Jr., M.D. of Newport as Trustee-at-Large to the Board of Trustees of the Medical Library for 1974.
2. The Council commended Dr. A. A. Savastano for his assiduous efforts in organizing the nationally known and highly successful Medical Aspects of Sports Conference held at the University of Rhode Island.
3. The Council was informed of the following information relative to the Phase IV Price Regulations: "Physicians may raise their fees a maximum of 2.5 per cent per year, pro-

(Continued on next page)

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vided the raise does not increase their profit margin. If a physician has not raised his fees since the institution of wage and price controls in 1971, the physician may raise his fees a cumulative total of 5 per cent, provided he does not violate the profit margin test in doing so. Physicians are no longer required to post signs under the Phase IV regulations." Notices were inserted in the July and September issues of the RHODE ISLAND MEDICAL JOURNAL.

4. The Council noted that the newspapers had commented on the President's fine presentation opposing the drug formulary and drug substitution bills at the hearings before the House and Senate Committees of the Rhode Island General Assembly.
5. The President commended Dr. Robert V. Lewis for his excellent presentation at the PSRO meeting at the Rhode Island Department of Health in August. Doctor Lewis spoke on behalf of R. I. PSRO, Inc. and gave sound reasons as to why Rhode Island should have a single statewide PSRO designation.
6. The Council was informed that Dr. Donald B. Effler, The Cleveland Clinic, Cleveland, Ohio, has been named as the 1974 Chapin Orator. Dr. Russell B. Roth, President of the American Medical Association, has also been invited to address the Society's Annual Meeting on Wednesday, March 31, 1974, at the Colonial Hilton Inn.
7. The Immediate Past President, Executive Secretary and Assistant Executive Secretary represented the Society at a PSRO meeting held in Boston in July. A report on the conference is appended. (Appendix A.)
8. The Council cited Dr. Earl J. Mara for his long, faithful and loyal service to the Rhode Island Medical Society. Doctor Mara, former

President of the Society, was a member of the Council for many years during the past three decades.

9. Approval was given the joint billing procedure whereby, commencing in 1974, RIMPAC dues will be included with the Medical Society annual dues statement.
10. The Council was informed of the staff preparation of the Blue Cross-Blue Shield mailing for 1973-1974 and that Blue Shield Plan 100 will be offered to the membership providing that a sufficient number (50 per cent) of physicians subscribe to the plan.
11. The Council voted to support a surgical study to be conducted by Rhode Island Health Services Research, Inc. The request for support originated with the American College of Surgeons.
12. Regarding the problems of claims payments and the supply of patient data to the Rhode Island Group Health Association, the Council voted:
 - 1) That physicians need to furnish only summary reports on patients on request from the physician in charge of the R. I. Group Health Association, as they would do for any insurance company request.
 - 2) That the issue regarding payment of usual and customary fees for R. I. Group Health Association patients referred to a physician as a private patient be referred to the Ad Hoc Committee for Review of the R. I. Group Health Association with the request that it resolve the matter and establish guidelines as necessary.
13. The Council approved of the appointment of Dr. George Monahan, Chairman of the Committee on Occupational Health, as official delegate to the 33rd Annual Congress on Occupational Health.
14. The President informed the Council of his July appearance on Channel 12 TV in which he fielded questions pertaining to the scientific value of acupuncture.
15. The Council was informed that Dr. Robert V. Lewis, Immediate Past President, was named to the Graduate Medical Education Council of Brown University.
16. The Council approved a resolution which was submitted to the American Medical Association House of Delegates and subsequently adopted concerning the development of com-

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patibility of coding systems and of diagnostic codes for hospital discharge data. This resolution also required the AMA Council on Medical Service to report back any results to the House of Delegates at the 1973 Clinical Convention.

17. The Council voted that the Rhode Island Medical Society endorse the efforts of the Rhode Island Ophthalmological Society to engage a public relations firm to publicize widely the ophthalmological and optometric issues resulting from the legislative action.
18. The Council reaffirmed its mail ballot in July which endorsed the Health Planning Council's project to attain an "Optimum Balance of Health Care Facilities and Services" for Rhode Island.
19. The Council approved the appointment of a representative of the Child-School Health Committee to attend the 14th National Conference on Physicians and Schools to be held on October 4-6. Dr. Betty Mathieu will represent the Committee at this meeting.
20. The Council voted to express to the officials of the State Department of Corrections, and to the Governor, that the Society is concerned about the health care of the inmates of the ACI, and that it is prepared to establish an Advisory Committee to the Director to assist in any way possible toward solutions to current problems. Since the vote of the Council, the Committee under the Chairmanship of Richard D. Baronian, M.D., has met with the Department of Correction officials and is awaiting specific guidelines regarding the committee's role in reviewing medical care at the prison. The other members of the Committee are: Ronald J. Cavanagh, M.D., Mary P. Colbert, M.D., Joseph Donahue, M.D., Peter Mathieu, M.D., Mildred Robinson, M.D., and H. Denham Scott, M.D.
21. Approval was given for the Woman's Auxiliary to present an AMA-ERF check in the amount of \$1,361.42 sent to the Society as a contribution for Brown University Medical School.
22. The Council was informed of the appointment of Dr. Allan R. G. Wallace of Newport as representative of the Society to the Governor's Permanent Advisory Council on Drug Abuse Control.
23. The Council agreed that letters of dispute concerning fees should be forwarded to the

Chairman of the Mediation Committee who would then screen them for a possible malpractice or legal involvement. The Chairman would transmit to the State Committee on Peer Review those letters which do not seem to involve possible litigation.

24. The Council endorsed a "State-Wide Conference on the Hospital Care of the Alcoholic" to be held on October 16 and 17 at the Butler Hospital Center.

Appendix A

REPORT OF PSRO REGIONAL CONFERENCE IN BOSTON

Dr. Robert V. Lewis, Ted Lynch and the writer attended an Invitational Regional Conference on PSRO held in Boston on Friday and Saturday, August 3 and 4. The meeting was sponsored by the AMA. Robert B. Tunter, M.D., member of the AMA Board of Trustees and the National Professional Standards Review Council, chaired the entire meeting.

There was not much "fresh" material introduced at this meeting but generally a review of past PSRO activities leading up to the present time. The audience and panels were comprised of state medical society officers and administrators, Blue Cross-Blue Shield officials and HEW representatives. Most of them were from the New England area although some had come from as far as Washington, D.C. and Utah.

John Farrell, M.D., Dr. William Bauer's (PSRO) assistant at HEW, mentioned that the government had no intention of imposing national norms. Such norms would be established on a regional basis. Doctor Farrell, incidentally, is a former specialist in OB-GYN from Connecticut before he moved over to HEW some three years ago. He stated that the full spectrum of review

(Continued on next page)

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services will not be expected or required of a PSRO until a full twenty-four (24) months after the conditional PSRO is accepted by HEW and the contract is signed. Every PSRO will begin as a skeletal organization.

Dr. Robert Hunter discussed the matter of PSRO area designations and mentioned that a recent AMA survey indicated that thirty-six (36) states desired a single statewide area designation. The guidelines from HEW relating to this subject seem to favor a single statewide PSRO area for Rhode Island. You are all familiar with these guidelines. I believe, so I won't mention them in this paper.

Doctor Hunter said that Senator Bennett had originally intended for a PSRO area to contain up to a maximum of one thousand (1,000) physicians. When only thirteen (13) states were found to have less than one thousand (1,000) physicians, he changed the maximum figure to read twenty-five hundred (2,500). The Washington State Medical Association is the only state organization which has surveyed all of its members to determine their opinions on area designations. Ninety (90) per cent of those responding indicated their preference for a single statewide designation.

James F. McDonough, M.D., Immediate Past President of the Massachusetts Medical Society,

UNIFORM CODING SYSTEM OF HOSPITAL DISCHARGE DATA

(Concluded from page 466)

objectives. The Task Force is reviewing a feasible means of developing a uniform system or a set of compatible systems for the recording and retrieval of medical data.

It seems evident that the Task Force on Data Collection, Processing, and Storage is moving objectively to accomplish the purposes stated in Resolution 113. Its recommendations will be transmitted to the Board of Trustees through the AMA Advisory Committee on PSRO. In view of those well-defined studies, together with related ongoing activities to expand the use of uniform terminology and coding systems, such as Current Procedural Terminology (CPT-3) and Current Medical Information and Terminology (CMIT), the Board and the Council recommend that the AMA efforts be concentrated through existing channels rather than undertaking other duplicative activities in response to Resolution 113.



discussed the Commonwealth Institute of Medicine. The CIM is a foundation which was funded by the Massachusetts Medical Society to monitor medicaid. In spite of its size, Massachusetts was second in the United States (behind only California) in total medicaid expenditures last year. Doctor McDonough stated that if physicians did not accept the PSRO concept to assume the responsibility for reviewing themselves, these activities would be done for them by the government. "If we oppose PSRO, what we get won't be better — it will be worse."

Mr. Louis Orsini, Vice President and Director of the Health Insurance Council, cautioned that physicians should not, in implementing the PSRO mechanism, devise a dual quality system. "Private patients should know," he said, "that you are not only interested in reviewing the services performed on medicaid and medicare patients."

Mr. Arthur Hanley, one of several Blue Cross-Blue Shield executives on the program, said that PSRO's represent merely an extension of present BC-BS responsibilities and that the Blues are in the "best position to supply support services — to be the technical support arm."

Doctors Marshall (Pa.) and Canzonetti (Conn.) discussed the Pennsylvania Medical Care Foundation and Hartford County Health Care Plan. They both agreed that the medical profession would "do well to accept the challenge of PSRO." Both indicated that their plans included representatives from labor, industry, insurance and consumers.

Due to several garrulous speakers during the morning session, the late afternoon program discussion of PSRO Data Collection, Storage, Processing and Norms Development was shortened. Mr. Carl Okelberry, representing the Utah Professional Review Organization, said that the data needed by the PSRO should be collected and controlled by itself. He went on to say that you "can't maintain the interest of the review physicians unless they feel that they are managing and controlling the program data."

Mr. Albert Giles, Executive Vice President of Massachusetts Blue Shield, suggested that the fol-

DERMAQUIZ ANSWER

(See page 470)

Left, Secondary syphilis.

Right, Glossitis exfoliativa, geographic tongue.



lowing questions be asked of any carrier who offers data services to the PSRO:

- 1) What are the data capabilities available to the PSRO?
- 2) How will the data resources be transmitted?
- 3) What is the process for the PSRO to set parameters?
- 4) Who is available from the staff to write the program and is he experienced?
- 5) Who is the identifiable officer to deal with and will he have the authority to make changes?
- 6) When can we begin the data services?
- 7) Where will the data base be?
- 8) When and how will we get the output?
- 9) How will the data appear? Will it be sufficiently decoded?
- 10) How much will it cost?

Claude Welch, M.D., Chairman of the AMA Task Force on Guidelines of Care, discussed PSRO Norms Development. He mentioned that the specialty societies have been working on norms for the past two years.

Walter Buttrick, Jr., M.D., representing New Hampshire and Vermont Blue Cross-Blue Shield, reiterated the often expressed opinion that only physicians are suited for the task of reviewing physicians' services. "We must continue to compare the services rendered in one institution with another, and the norms of care must reflect the changes in care." "Furthermore," he went on to say, "the norms must not become a static phenomenon."

Marshall Kreidberg, M.D., from the Tufts-New England Medical Center, reminded the audience that in addition to medicaid and medicare, PSRO also includes rehabilitative services for children. He further declared that an audit which checks only for errors of omission is not enough. "Audits must include errors of commission, too."

This Boston meeting afforded us the opportunity to meet the staff from the HEW Regional Office in Boston. In our talk about the forthcoming PSRO meeting on August 15 in Providence, HEW personnel assured us that the sole purpose of the meeting was to discuss PSRO area designations. Mr. Bill Beck (HEW, Boston) indicated to us that Rhode Island, with its size and concentration of physicians and health facilities in Providence County, was a likely candidate for the single area designation.

TIM NORBECK

REPORT OF THE TREASURER

John P. Grady, M.D.

1. 1972 Professional Audit

Ward, Fisher and Company have completed their audit of our 1972 financial records and they have filed their report to me, stating that they have examined the records of the Society and the Medical Journal in accordance with generally accepted auditing standards and other procedures as were considered necessary. In their opinion the statement of cash receipts and disbursements present fairly the cash transactions of the Society and the Journal for the year ended December 31, 1972.

2. Agency Account

The most recent evaluation of the investments of the Society is appended as part of this report. In the opinion of the bank's investment manager, our present holdings should be maintained as the account is adequately diversified in quality holdings.

3. Analysis of Membership Relative to Dues Payment

As of September 1 the Society had 1,210 members of whom 1,072 are subject to annual dues, while 138 members are exempt from dues payment for the following reasons:

Age	83
Illness or disability	12
Military service	2
Retired from active practice	28
Postgraduate work	1
Clergy	1
Residency	9
Fellowship	2
	<hr/>
	138

4. Budget for 1974

Under a bylaw requirement, I must submit at this time, a budget for the year starting next January 1. This task has been undertaken by evaluating our receipts and disbursements of 1972 as well as the records to date of the current year. I can only anticipate that non-dues income will continue as of the current year, and that we can maintain our anticipated disbursements in 1974 in spite of increasing costs of operation of the Society's activities. A tentative budget, approved by the Council, is appended to this report.

RECOMMENDATIONS FROM THE COUNCIL

Stephen J. Hoyer, M.D., Secretary

- 1. George W. Waterman, M.D., of Providence, is (Continued on next page)

PEDIATRIC POSTGRADUATE COURSE AVAILABLE

The 23rd Annual Postgraduate Course in Pediatrics of The University of Texas Medical Branch will be held in Galveston, Texas, March 14, and 15, 1974. The course will be entitled "Pediatric Potpourri" with guest lecturers Paul Wehrle, M.D., Elliott Ellis, M.D., and Marvin Cornblath, M.D.

This program is acceptable for 12 prescribed hours by the American Academy of General Practice and registration fee will be \$75.00. Further information will be furnished by Lillian H. Lockhart, M.D., Chairman, Pediatric Postgraduate Committee, The University of Texas Medical Branch, Galveston, Texas 77550.

- re-nominated for a three-year term as a Trustee of the Benevolence Fund of the Society. The other Trustees are Alfred L. Potter, M.D., (1974), and David Freedman, M.D. (1975).
2. The Council recommends that the Rhode Island Society on Neurosurgery be awarded a representative to the House of Delegates of the Rhode Island Medical Society.
3. The Council approves of the concept of having the Rhode Island Medical Society sponsor a Health Fair to be held in conjunction with the Bicentennial celebration in 1976. It was agreed that \$62,000, as proposed by advertising counsel, be established as a maximum to be allocated for this project provided the Society receives 50 per cent matching funds from the Rhode Island Bicentennial Commission.
4. The Council approves of the expenditure of \$22,000 to the Eastern Construction Company for library building repairs. Several financing mechanisms were discussed, such as taking the monies from the general fund or making an assessment on the members, and it was decided that this financing matter should be brought before the House of Delegates for its determination.
5. The Council, having reviewed and approved the 1974 budget, recommends at this time that the annual dues be \$100 for members in practice more than one year and \$50 for those in their first year of practice.

(To be continued in December Issue)

ONE SENTENCE ESSAY

Nebulous verbosity opens a road to the most prestigious academic posts to people of small intelligence whose limitations would stand naked if they had to state what they have to say clearly and succinctly.

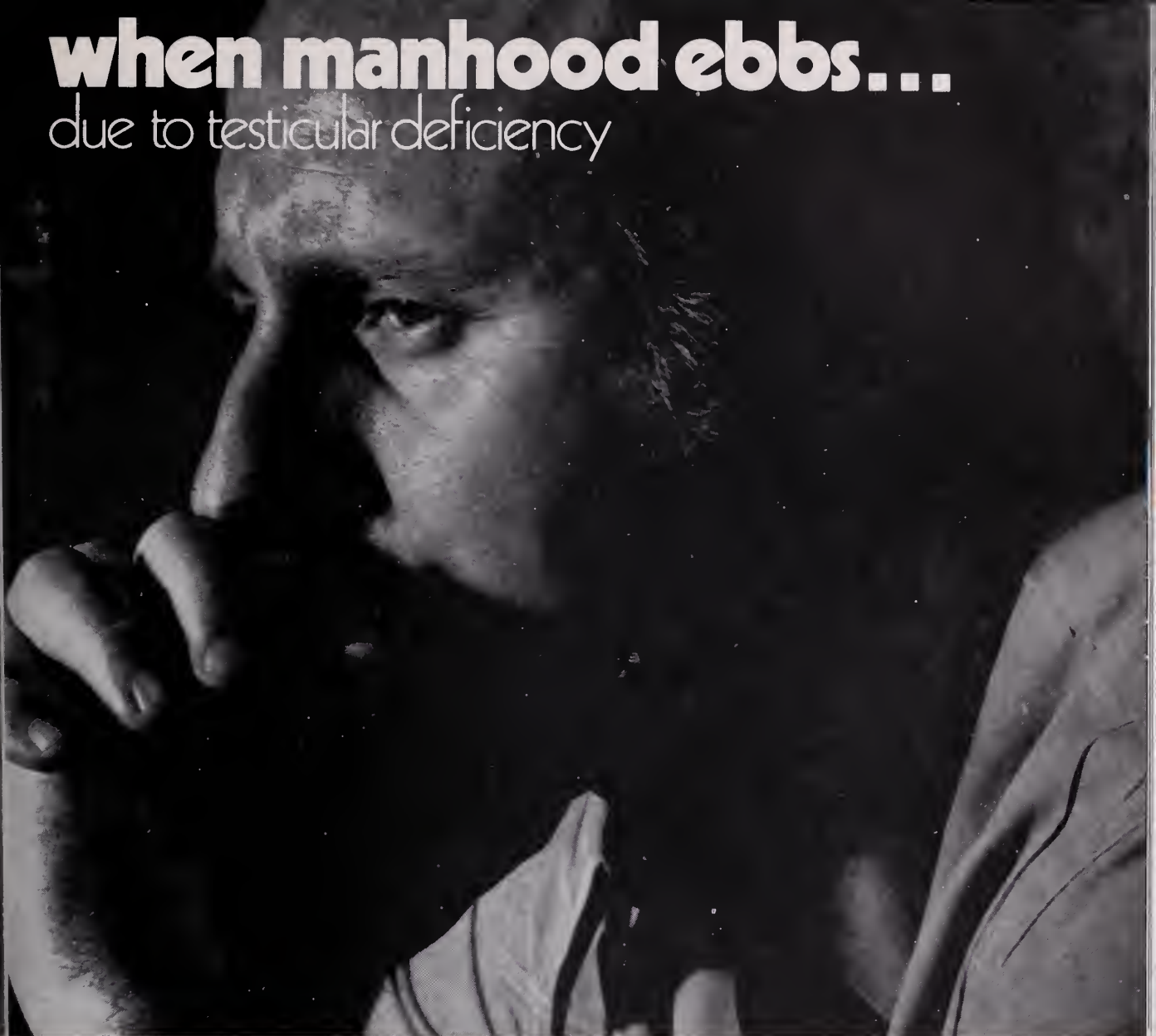
. . . Stanislas Andreskin in *Social Sciences as Sorcery*.

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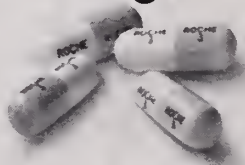
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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruption, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increase and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

PEACE

December 1973
Vol. 56, No. 12

SHA

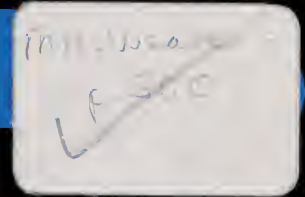
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Season's Greetings

SHALOM

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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

Valium® (diazepam)

To help you manage excessive psychic tension

Rhode Island Medical Journal

DECEMBER, 1973

Volume 56, No. 12

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(*Also Member Publications Committee)

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acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

It's time for action to defend the laws and regulations that protect your patients against drug substitution.

These professional and trade organizations are united
in supporting ant substitution statutes and regulations

The American Academy of Dermatology

The Board of Directors of the
American Academy of Family
Physicians

The Executive Board of the
American Academy of Neurology

The Committee on Drugs of the
American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the
American College of Obstetricians
and Gynecologists

The Board of Regents of the
American College of Physicians

The Board of Trustees of the
American Dental Association

The Board of Trustees of the
American Medical Association

The American Psychiatric Association

The Executive Committee of the
National Association of Retail
Druggists

The Board of Directors of the
Pharmaceutical Manufacturers
Association

The National Wholesale Druggists'
Association



Joint Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations specifically prohibiting unauthorized substitution and encouraging joint discussion and selection of the source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus realized and preserved in the interest of patient welfare.

The antisubstitution laws have obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists from their responsibilities to patients. As a practical matter, however, such laws and regulations encourage interprofessional communications regarding drug product selection and assure each profession the opportunity to exercise fully its expertise in drug selection, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that

economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

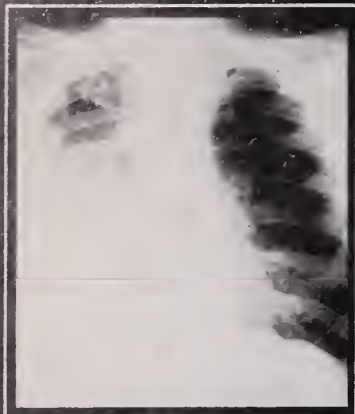
There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

*Pharmaceutical Manufacturers Association
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the relief needed.

HERE Biliary calculi



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beyond the scope of
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restricted by state law); by
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Empirin Compound with
Codeine **No. 3**, codeine
phosphate* 32.4 mg. (gr. 1/2);
No. 4, codeine phosphate*
64.8 mg. (gr. 1). *Warning—
may be habit-forming. Each
tablet also contains: aspirin
gr. 3 1/2, phenacetin gr. 2 1/2,
caffeine gr. 1/2.



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Research Triangle Park
North Carolina 27709

WHEREVER IT HURTS

HERE
Osteoarthritis

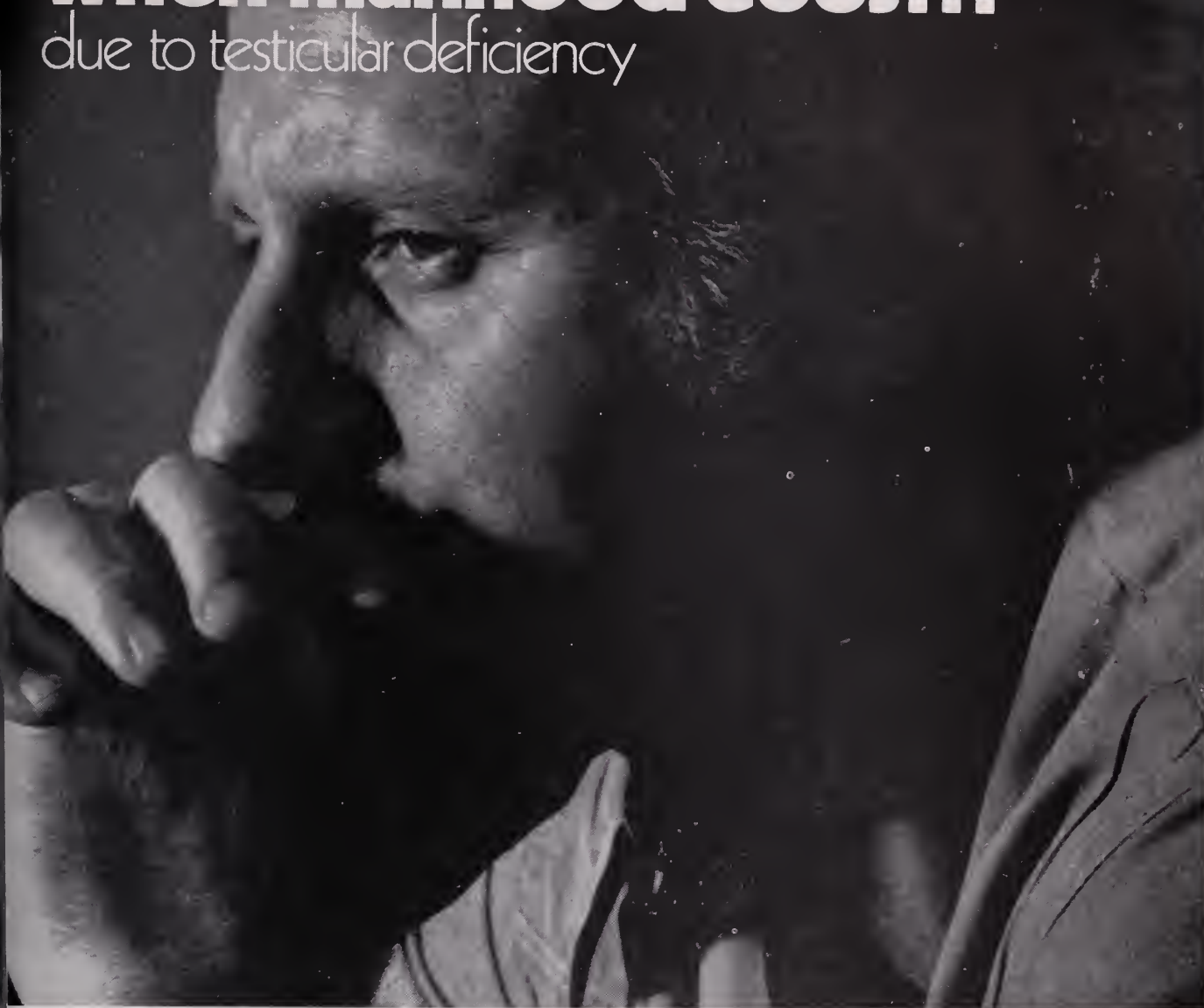


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#4, codeine phosphate* (64.8 mg.) gr. 1

when manhood ebbs...

due to testicular deficiency



Halotestin® 5 mg tablets

fluoxymesterone, Upjohn oral hormone replacement

*"When impotence is the principal complaint of a patient, it is usually the result of an emotional disturbance, in which case androgen therapy is valueless and at times may add to the psychic trauma."**

Halotestin® Tablets—2, 5 and 10 mg
(fluoxymesterone Tablets, U.S.P., Upjohn)

Indications in the male: Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration: 1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

In the female: 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

Contraindications: Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal moles. Pregnancy.

Warnings: Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

Precautions: Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

Adverse Reactions: Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

How Supplied:

2 mg—bottles of 100 scored tablets.

5 mg—bottles of 50 scored tablets.

10 mg—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

J-3262-4 MED B-6-S (MAH)

*Cecil-Loeb. Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermott, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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Upjohn

The Upjohn Company, Kalamazoo, Mich. 49001

Pretend it's January. Would you invest in 1973?

NEW YORK STOCK EXCHANGE			
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DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

MEDICAL EVENTS CALENDAR

Monday, January 7, 1974

PROFESSOR OF THE DAY

Hans A. Buchholz, M.D.
Professor of Orthopaedic Surgery
Surgeon-in-Chief, St. Georg Hospital
Hamburg, Germany

Rhode Island Hospital
George Auditorium
1:30 p.m. to 5:00 p.m.

Wednesday, January 9, 1974

ORTHOPAEDIC NEUROLOGY

John O. Strom, M.D.
Director, Electroencephalography
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Friday, January 11, 1974

**MENINGOCOCCAL DISEASE — PREVENTION AND
PROPHYLAXIS**

Ronald Gold, M.D.
Assistant Professor of Pediatrics
University of Connecticut Health Center
Hartford, Connecticut

Roger Williams Hospital
Kay Auditorium
10:30 a.m. to 12 noon

Saturday, January 12, 1974

"THE USE OF ATROPINE IN ACUTE MYOCARDIAL INFARCTION"

David Redwood, M.D.
Member of Stephen E. Epstein's Group, Cardio-
logy Branch, National Heart and Lung Institute
Department of Health, Education and Welfare
Bethesda, Maryland

Rhode Island Hospital
George Auditorium
10:00 a.m.

Wednesday, January 16, 1974

MANAGEMENT OF CHRONIC ARTHROPATHIES

Joseph P. Lombardozzi, Jr., M.D.
Medical Staff
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

MEDICAL EVENTS CALENDAR

Saturday, January 26, 1974

"TENTATIVE SOLUTIONS FOR SOME OF THE PUZZLING
PROBLEMS OF THE INFLAMMATORY DISEASE OF THE
BOWEL"

Rupert B. Turnbull, Jr., M.D.
Head, Department of Colon and Rectal Surgery
Cleveland Clinic
Cleveland, Ohio

Rhode Island Hospital
George Auditorium
10:00 a.m.

Wednesday, January 30, 1974

VASCULAR PROBLEMS OF THE LOWER EXTREMITIES

Warren W. Francis, M.D.
Surgical Staff
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Saturday, February 2, 1974

"PAROTID GLAND TUMORS — DIAGNOSIS AND MANAGEMENT"

John C. Gaisford, M.D.
Chief, Division of Surgery
The Western Pennsylvania Hospital
Pittsburgh, Pennsylvania

Rhode Island Hospital
George Auditorium
10:00 a.m.

Wednesday, February 6, 1974

INDICATIONS FOR USE OF DIFFERENT MODALITIES IN
PHYSICAL MEDICINE

Cairbre B. McCann, M.D.
Director of Rehabilitation Medicine
Rhode Island Hospital

Rhode Island Hospital
8th Floor Conference Rm.
1:00 p.m.

Saturday, February 9, 1974

"RECENT DEVELOPMENTS IN THE ETIOLOGY, DIAGNOSIS
AND MANAGEMENT OF CANDIDA SEPSIS"

H. Harlan Stone, M.D.
Professor of Surgery
Emory University School of Medicine
Atlanta, Georgia

Rhode Island Hospital
George Auditorium
10:00 a.m.





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

THE PROGRAM IN MEDICINE AND THE PRACTICING PHYSICIAN

From its outset, the Brown University Program in Medicine has benefited from the active support and counsel of the practicing physicians of Rhode Island. In the inaugural year of the Program, large numbers of doctors from the private sector of medicine have committed their talents not only to do its daily operation but also to its fundamental philosophy and priorities.

These voluntary contributions touch virtually every major purpose and phase of the Program.

Clinical Teaching: The clinical faculty, including physician members of the Sections of Medicine, Surgery, Psychiatry, Human Growth and Development, Community Health, Pathology, and Radiation Medicine, currently numbers 286 men and women. Of these, 227 (79 per cent) are in the category of voluntary clinical faculty, distributed as follows: Section of Medicine, 81; Section of Surgery, 82; Section of Psychiatry, 14; Section of Human Growth and Development, 28; Section of Community Health, 3; Section of Pathology, 14; other 5.

These 227 physicians, representing about 16 per cent of the in-state, registered medical doctors of Rhode Island, fulfill the bulk of preceptorship activities in the Program. Thus the most sensitive step in the education of a physician, his introduction to the intricacies of the patient-doctor relationship, is largely in the hands of our voluntary staff. In addition, the practicing physicians of the state form the principal cadre for the introductory teaching of physical diagnosis and the essentials of psychiatric interviewing, two courses given during the summer between the first and second years. The laboratory component of the didactic course in general pathology is also enriched by the community hospital pathologists who have contributed

their professional services to the teaching efforts of the University.

University Committees: Members of the voluntary faculty participate fully in the activities of the Admissions Committee of the Program in Medicine. The committee, in turn, makes use of the services of a Board of Interviewers, comprised of 21 practicing physicians from Providence, Pawtucket, Kingston, Cumberland, and Newport who were chosen after consultation with the Rhode Island Medical Society. All candidates for the Program in Medicine, whether they apply for other campuses or belong to the seven-year program at Brown University, are interviewed by physicians who evaluate their suitability for the study and practice of medicine. The University relies heavily upon the judgment and prognostic estimates of these interviewers.

Members of the voluntary faculty also contribute materially to the deliberations of committees concerned with curriculum, audiovisual education and continuing graduate education.

Student Counselling: The Curriculum Committee of the Division of Biological and Medical Sciences, in its final report of January, 1973, stated that "...there should be a counselling system available at all times in order to help students make an intelligent decisions." A great deal of attention and effort has therefore been invested in a meaningful form of student counselling. Twenty-eight practicing physicians donate time, energy and experience in advising medical students. These 28 physicians, in terms of medical specialty, are divided as follows: internal medicine, 12; general surgery, 8; pathology, 2; and one each from anesthesiology, radio-

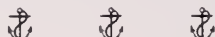
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therapy, pediatrics, gynecology, ophthalmology and neurology.

The polarity which sometimes prevails between the full-time physician or health scientist, on the one hand, and the active practitioner on the other, is substantially diminished by the extent to which both groups accept and acknowledge the meaningful partnership role each plays in the training of medical students.

The enlightened self-interests of both the practicing and campus communities are served by this amalgamation of efforts. Certainly Brown University and its medical students are deeply grateful for the indispensable professional contributions of their voluntary faculty.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs



The following Changes In Regulations have been Published by the Cost of Living Council in the FEDERAL REGISTER

The following changes in regulations have been published by the Cost of Living Council in the *Federal Register*. Effective Jan. 1, physicians may raise fees by 4% annually, provided the increase does not raise the profit margin. The fee for an individual service or procedure may be raised by as much as 10%, but the physician's aggregate weighted price increase must not exceed 4%. It

will be a voluntary compliance program. The Cost of Living Council will not attempt to monitor MD and DO fees, but will conduct random checks on fee increases. Details of the new regulations appeared in the Nov. 12 issue of *American Medical News*. A request for exemption from phase 4 wage and price controls has been filed with the Cost of Living Council by the AMA on behalf of physicians.

SELF-EVALUATION TESTS AVAILABLE

The Committee on Continuing Medical Education of the Society agreed at a recent meeting to poll the membership to determine its interest in using the self-assessment program of the Philadelphia County Medical Society. The examination tests the physician in the general practice of medicine. This self-graded test will be offered by the com-

mittee if the membership demonstrates a sufficient interest. A considerable saving can be achieved by ordering in quantity.

Please indicate below whether you would like to take the test. Detach and forward to: The Rhode Island Medical Society, 106 Francis Street, Providence, R. I. 02903.

PLEASE RETURN TO THE MEDICAL SOCIETY

I am interested in taking the self-evaluation test in the general practice of medicine as used by the Philadelphia County Medical Society.

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Report of the House of Delegates of the Rhode Island Medical Society

*A Summary of the Meeting of October 3, 1973**

REPORT OF AMA HOUSE OF DELEGATES 122nd ANNUAL CONVENTION NEW YORK, JUNE 24-28th

The AMA House of Delegates acted on a wide range of issues during the 122nd Annual Convention which affect physicians in their relationships with government, medical schools and hospitals, and with the public.

Physicians and the Government

PSRO's: Two reports from the Board of Trustees outlining successful AMA efforts in providing physician input into the drawing up of PSRO regulations by the government, and in other areas, were filed by the House. In addition, two resolutions bearing on PSRO's were adopted. One resolution, initiated by California and amended, reads as follows:

Resolved, That the Secretary of Health, Education, and Welfare be informed that the only organization which can give qualified peer review for physicians services to the patient, physician, government, and taxpayer are those composed of practicing physicians, whether these are state or local groups, and be it further

Resolved, That since many of these practicing physician groups are functioning successfully, with multiple approaches, as peer review organizations, the regulations be so written to authorize these existing peer groups to continue their review as PSRO's or as functioning units of PSRO's, thus partially alleviating the unnecessary and costly implementation of new agencies as PSRO's.

The second resolution adopted was a substitute in response to a number of resolutions introduced, ranging from those calling for the AMA to go on record in opposition to PSRO's, to one urging the Association to seek repeal of the law.

The substitute resolution, which conforms to PSRO policy approved by the House at the 1972 Convention, reads:

Resolved, That although it is recognized that repeal or modification of PSRO legislation ultimately may be required to preserve high quality of patient care, the American Medical Association should oppose any facets of this current legislation which act to the deterioration of quality care, publicize such deleterious facets, and place highest priority on developing and pursuing appropriate amendments to preserve high quality of patient care.

Wage-Price Controls: Six resolutions were introduced protesting discrimination against physicians under the government's Economic Stabilization Program. The Reference Committee F pointed out that, "Although Phase III has officially ended, discrimination . . . has not been corrected and there is no assurance that other discrimination will not arise in the future."

Accordingly, the following substitute resolution was adopted by the House:

Resolved, That the American Medical Association continue to work by all lawful and practicable means to assure non-discriminatory treatment for physicians under present and future Economic Stabilization Programs.

FDA Drug Regulations: Six resolutions were introduced pertaining to FDA policies and regulations affecting the practice of medicine. The House adopted a substitute resolution which directs the AMA to, (1) Continue to protest proposed and current regulatory activities of the FDA which have the effect of restricting use of prescription drug to "official labelling"; (2) Study the possibility of proposing modifications to the Food, Drug and Cosmetic Act to correct current problems; (3) Continue to work closely with the FDA

(Continued on page 516)

*Continued from November, 1973 Issue (Vol. 56, No. 11)

Peripatetics

The Barrington Boosters Club honored ROBERT W. DREW, team physician for the Barrington High School football squad at a halftime ceremony on Thanksgiving. The 1973 Barrington-Bristol Souvenir Football Program was dedicated to Doctor Drew. It said: "The officers and members of the Barrington Boosters Club with affection and respect dedicate the 1973 Eagles-Colts Souvenir Football Program to Doctor Bob Drew, who for years has faithfully administered to all participants who have been injured on the athletic field. A gentle, thoughtful, and kind man, his medical skills have contributed enormously to the success of the Barrington High School teams." Because of a previously planned family reunion, Doctor Drew was unable to accept a plaque. JOHN BERNARDO accepted the award in his absence.

* * *

TARANATH SHETTY has been certified by The American Board of Neurology and Psychiatry with special competence in Child Neurology.

* * *

FRANK SULLIVAN has been appointed Chairman of the Ad Hoc Committee on the Professional Standards Review Organization for the American Psychiatric Association. The initial task of the committee is the establishment of guidelines on psychiatry.

* * *

CHARLES B. ROUND of Warwick is one of three officers and 54 new members of the Board of Governors of the American College of Surgeons at the recent Clinical Congress of the College held in Chicago.

ALLAN A. DiSIMONE was installed as president of the medical staff of St. Joseph's Hospital at the staff's recent annual meeting. Other officers seated were ANTHONY MERLINO, President-Elect; ANTHONY GUGLIELMI, Treasurer; JORGE BENAVIDES, Secretary, and GEORGE COLEMAN and ROBERT A. INDEGLIA, representatives-at-large.

* * *

New members of the St. Joseph's medical staff recently appointed are: JESSE A. MENDOZA, Obstetrics-Pynecology; JOSEPH P. LOMBARDOZZI, Medicine; STEPHEN BERKES, Surgery-Emergency Room Service; RICHARD SNYDER, Pediatrics; CECILIA LLAMAS, Pathology,

(Concluded on page 531)

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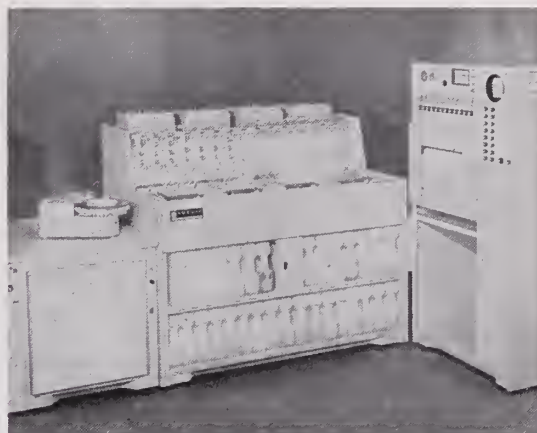
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Recommendations[†] on Combination Live Virus Vaccines

American Academy of Pediatrics

Committee on Infectious Diseases

In the September 15, 1971 AAP Newsletter sent to Academy members, the Committee on Infectious Diseases of the American Academy of Pediatrics stated its recommendations on the use of combination live virus vaccines. After a careful review of available data, the committee concluded that:

- "This information indicates that the products are both safe and effective when used as directed."
- The vaccine "...can, therefore, be recommended with the obvious advantages of reduction in the number of injections for any given child and a concomitant decrease in the required visits to a physician's office or clinic."

[†]For complete text of both recommendations see your MSD representative or write to Professional Service Dept., Merck Sharp & Dohme, West Point, Pa. 19486.

United States Public Health Service

Advisory Committee on Immunization Practices

In the April 24, 1971 issue of *Morbidity and Mortality Weekly Report*, the Advisory Committee on Immunization Practices of the United States Public Health Service presented recommendations on the use of combination live virus vaccines. The committee stated that:

- "Data indicate that antibody response to each component of these combination vaccines is comparable with antibody response to the individual vaccines given separately."
- "There is no evidence that adverse reactions to the combined products occur more frequently or are more severe than known reactions to the individual vaccines (see pertinent ACIP recommendations)."
- "The obvious convenience of giving already selected antigens in combined form should encourage consideration of using these products when appropriate."



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Given at age 12 months, M-M-R provides for vaccination early in life against measles, mumps, and rubella.

MSD suggested immunization schedule for well babies

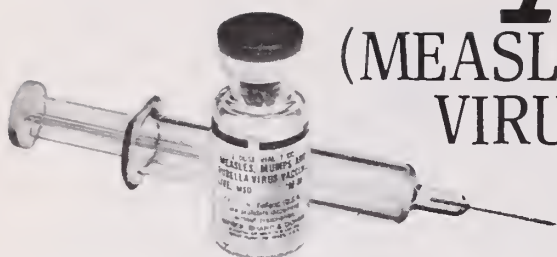
Age	Vaccine(s)
2 months	DPT (diphtheria-pertussis-tetanus) Oral poliomyelitis vaccine (triple)
3 months	DPT ¹
4 months	DPT Oral poliomyelitis vaccine (triple)
6 months	Oral poliomyelitis vaccine (triple)
12 MONTHS	M-M-R (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE, MSD)

1. This vaccination may be given at 3 months, 5 months, or at 6 months, depending on your preference or on the condition of the child.

Since vaccination with a live virus vaccine may depress the results of a tuberculin test for four weeks or longer, the test and the vaccine should not be given during the same office visit.

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For a brief summary of prescribing information, please see following page.



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Contraindications: Pregnancy or possibility of pregnancy within three months following vaccination; infants less than one year old; sensitivity to chicken or duck, chicken or duck eggs or feathers, or neomycin; any febrile respiratory illness or other active febrile infection; active untreated tuberculosis; therapy with ACTH, corticosteroids, irradiation, alkylating agents, or antimetabolites; blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic systems; gamma globulin deficiency, i.e., agammaglobulinemia, hypogammaglobulinemia, and dysgammaglobulinemia.

Precautions: Administer subcutaneously; do not give intravenously. Epinephrine should be available for immediate use should an anaphylactoid reaction occur. Should not be given less than one month before or after immunization with other live virus vaccines, with the exception of monovalent or trivalent poliovirus vaccine, live, oral, which may be administered simultaneously; vaccination should be deferred for at least three months following blood transfusions or administration of more than 0.02 ml immune serum globulin (human) per pound of body weight, or human plasma.

Due caution should be employed in children with a history of febrile convulsions, cerebral injury, or any other condition in which stress due to fever should be avoided. The physician should be alert to the temperature elevation which may occur 5 to 12 days after vaccination.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Attenuated live virus measles, mumps, and rubella vaccines, given separately, may temporarily depress tuberculin skin sensitivity; therefore, if a tuberculin test is to be done, it should be scheduled before vaccination, to avoid the possibility of a false negative response.

Before reconstitution, refrigerate vaccine at 2-8 C (35.6-46.4 F) and protect from light. Use only diluent supplied to reconstitute vaccine. If not used immediately, return reconstituted vaccine to refrigerator at 2-8 C (35.6-46.4 F), and discard after eight hours.

Adverse Reactions: To date, clinical evaluation has not revealed any adverse reactions peculiar to the combination. The adverse reactions that occurred were limited to those that have been reported previously for the component vaccines.

Fever, rash; mild local reactions such as erythema, induration, tenderness, regional lymphadenopathy; parotitis; thrombocytopenia and purpura; allergic reactions such as urticaria; arthritis, arthralgia, and polyneuritis.

Occasionally, moderate fever (101-102.9 F); less commonly, high fever (above 103 F); rarely, febrile convulsions.

Encephalitis and other nervous system reactions that have

occurred very rarely with the individual vaccines may also occur with the combined vaccine. Experience from more than 44 million doses of all live measles vaccines given in the U.S. by mid-1971 indicates that significant central nervous system reactions such as encephalitis, occurring within 30 days after vaccination, have been temporally associated with measles vaccine approximately once for every million doses. In no case has it been shown that reactions were actually caused by vaccine. The Center for Disease Control has pointed out that "a certain number of cases of encephalitis may be expected to occur in a large childhood population in a defined period of time even when no vaccines are administered. A survey conducted in New Jersey in 1965 showed that 2.8 cases of encephalitis (of unknown cause) occurred per million children, ages 1-9 years per 30-day period." However, the Center for Disease Control has analyzed the reported reactions following measles vaccines and pointed out that "the clustering of cases in the period 6 through 13 days after inoculation as well as the recovery of measles virus (probably the vaccine strain) from the CSF of one patient does suggest that some of these cases may have been caused by the vaccine." The risk of such serious neurological disorders following live measles virus vaccine administration remains far less than that for encephalitis with measles (one per thousand reported cases).

Transient arthritis, arthralgia, and polyneuritis are features of natural rubella and vary in frequency and severity with age and sex, being greatest in adult females and least in prepubertal children. Such reactions have been reported with live attenuated rubella virus vaccines. Symptoms relating to joints (pain, swelling, stiffness, etc.) and to peripheral nerves (pain, numbness, tingling, etc.) occurring within approximately two months after immunization should be considered as possibly vaccine related. Symptoms have generally been mild and of no more than three days' duration. The incidence in prepubertal children would appear to be less than 1% for reactions that would interfere with normal activity or necessitate medical attention.

How Supplied: Single-dose vials of lyophilized vaccine, containing when reconstituted not less than 1,000 TCID₅₀ (tissue culture infectious doses) of measles virus vaccine, live, attenuated, 5,000 TCID₅₀ of mumps virus vaccine, live, and 1,000 TCID₅₀ of rubella virus vaccine, live, expressed in terms of the assigned titer of the FDA Reference Measles, Mumps, and Rubella Viruses, and approximately 25 mcg neomycin, with a disposable syringe containing diluent and fitted with a 25-gauge, 5/8" needle. Also in boxes of 10 single-dose vials nested in a pop-out tray with a separate box of 10 diluent-containing syringes.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

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Book Review

WE MAINLINE DREAMS, the Odyssey House Story by Judianne Densen-Gerber, J.D., M.D. Garden City, N.Y., Doubleday & Company, Inc. 1973. \$9.95.

Possibly one of the reasons there was so much excitement and near panic raised by the epidemic of drug addiction in recent years was the lack of a ready solution and a great amount of confusion as to the role medicine should play. In "We Mainline Dreams" Judianne Densen-Gerber, M.D. gives us a one-woman view of at least a part of the solution — her creation of Odyssey House. This is not only a very effective therapeutic community for the treatment of drug addicts (and some people with other problems), but it represents one of the very few treatment programs that has successfully combined the expertise of ex-drug addicts and medicine.

This book is a collection of writings of Judianne Densen-Gerber and others on her staff of Odyssey House. It describes many aspects of the workings of therapeutic communities. It explains the difficulties of starting such a program. Not only was there political apathy and covering up of real problems, but also resistance from both orthodox medical organizations as well as from the addicts who resisted the stopping of playing of games long enough to get the program off the ground. Further along in the history of the program there was "The Great Split", the internal problems that so often upset this type of drug program. Other problems such as becoming stagnant, becoming too big, and loss of contact between the original founders and the newer residents in treatment are also well covered.

A significant aspect of the book is the description of various aspects of the Odyssey House community itself, such as intake, groups, general principles, marathons, levels of function, and graduation. As a former member of a similar therapeutic community, I personally understand and can picture what is being described. However, some of this is spread so widely through the entire book, sometimes with too little, sometimes with excessive detail, that I wonder if others not so well acquainted with these places will be able to collect the fragments together to synthesize a whole picture. Yet, the overall picture does explain well some phenomena which are difficult for outsiders to grasp, such as the combination of harsh, almost

(Continued on next page)

EXPERT WITNESSES

The Forensic Science Foundation is currently conducting a research project the objective of which is to define and evaluate the various services performed by the forensic science profession in the criminal justice process.

If, since 1972, you have given reports or testimony in **criminal** court or elsewhere in the criminal justice process as an expert witness for either the prosecution or for the defense, would you mail a card or note to the Forensic Sciences Foundation giving your name, address and area of expertise. The Foundation, in turn, will mail you a short questionnaire designed to group your type and degree of involvement with other individuals who have similar expertise.

If you know others who should be included in this survey would you call their attention to this appeal for help?

It is emphasized that this is a federally sponsored research project. The results will not identify any individuals. No formal solicitation will result from your participation since all names, addresses and questionnaires will be treated as confidential information.

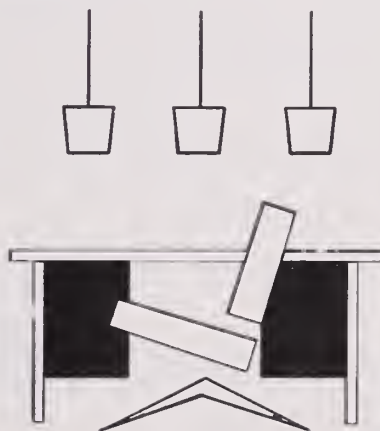
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cruel handling, with the tenderness and love that ultimately results in successful treatment.

There are also fascinating descriptions of some special parts of the program. One is the program involving the teaching of mothering to pregnant and post-partum addicts. Another is the one for schizophrenic addicts. Approximately 20 per cent of the addicts in Odyssey House are diagnosed as schizophrenic, and these are handled differently with medication and special groups. The emphasis here is on accepting one's "insanity" and through groups trying to diminish abnormal behavior. Incurability of schizophrenia is stressed. Although to me this represents too much emphasis on orthodox psychiatry (such as insanity), the usual ex-addict approach of ignoring differences and considering all addicts equal can also be dangerous.

Still another is an excellent description of a women's marathon with emphasis on the special problems of female addicts. There are other references to the problems of women — most seen through Judi's eyes and well reported in an disarmingly honest manner. Her hypothesis that a woman in Odyssey House does better when she is playing an active part as a leader and good female role model seems well founded.

Other special programs include a house for Spanish-speaking addicts, a house for special addicts (such as paralyzed and intellectually gifted), and a house for adolescents.

There are also chapters written by four ex-addict staff members. These give the reader a good personal picture of the many different faces of addicts — various races, types of backgrounds, different drugs, and talents. The book does much to explain in a human way why some people become involved with drugs and why some eventually obtain treatment and change. It does not shy away from stories of failure also.

Probably the most important part of the book for medical readers is the loud and clear message from Judianne and another doctor on the staff (Charlie Rohrs) that professionals can successfully work with ex-addicts to run a significant treatment program. The criticisms leveled against ex-addicts are well founded, in that their scope is limited and they may extend themselves at times beyond their expertise. There are also equally good criticisms of professionals by both doctors. Physicians are not well trained in the subject of addiction in medical school and must start listening to addicts for some of the answers. "It is liberating to begin to

learn from everyone around you, not just fellow doctors," as Charlie Rohrs puts it. One must be willing to look at and change one's feelings about oneself as an omnipotent doctor and become an equal part of the team. Charlie Rohrs explains that traditional medicine is based on acceptance of the patient's behavior and forgiveness (New Testament concept) as opposed to what he feels is needed to help addicts (Old Testament) where each individual must accept the responsibility of his or her behavior and where it is up to those helping that person to lead him or her to this realization. "We believe that a person can control his own behavior, that he must earn the right to have therapy, that he must be held responsible for what he does rather than be forgiven."

In Odyssey House, ex-addicts function as bridges to close gaps between professionals and addicts. This is a concept that could be adapted for other groups as well.

Charlie and especially Judianne stress that addicts and non-addicts are similar. All people play games. Judianne's ability to identify on a feeling level with members of her community explains why the program works. Her ability to be flexible with the program and with herself as a professional while maintaining high standards probably accounts for why she has been able to combine both professionals (who obviously are willing to behave in a similar fashion) and ex-addicts.

This book would be most helpful to anyone working with addicts and anyone interested in therapeutic communities. The book is clearly biased and needs no apologies for this.

This is also very valuable to any professional who is willing to look at where he or she stands as a human being. Because Judianne is so intensely personal and self-examining at all times, the message should be one to instill self confrontation and challenge and serve as catalyst — to examine whether one is living as the kind of human being one wants to be.

JUDITH EATON, M.D.
University of Rhode Island



ONE SENTENCE ESSAY

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Motility Disturbances of the Esophagus: A Working Classification With Remarks On Surgical Management

*By Classifying Disorders Respecting
Anatomic Site And Hypermotility Or Hy-
pomotility Proper Surgical Treatment
Can Be Selected*

By F. Henry Ellis, Jr., M.D., Ph.D.

Surgery for esophageal disorders has been anatomically oriented until relatively recently. The development of new investigative and diagnostic techniques during the past 25 years has provided a new dimension to the art. As a result the details of normal and abnormal esophageal function are being clarified, and operation can more intelligently be directed. Normal esophageal function can thus more nearly be restored by surgical procedures, and the deleterious effects of an improperly performed operation avoided. To achieve this goal the normal function of the esophagus must clearly be understood. Only then can a proper classification of abnormal esophageal function be formulated and appropriate surgical therapy be selected.

NORMAL ESOPHAGEAL FUNCTION

The normal function of the esophagus is to convey ingested material from the pharynx to the stomach. Mechanisms are located at either end of the esophageal tube to prevent easy access of air from above and gastric contents from below. The essentials of esophageal function are thus very simple. In detail, however, they are both complex and controversial. Employing techniques of esophageal manometry, primarily developed in the lab-

oratories of Code¹ at the Mayo Clinic and of Ingelfinger² in Boston, the details of normal esophageal function have been clarified. At the upper end of the esophageal tube is a band of elevated pressure about 2.5 cm in length with a mean maximum pressure of about 40 cm of water. At the beginning of deglutition pharyngeal pressure rises, and the resting pressure of the upper sphincter decreases. Immediately thereafter sphincteric contraction occurs, and the primary peristaltic wave of the esophagus is initiated. This wave traverses the body of the esophagus in a uniform fashion, its intensity varying from 50 to 100 cm of water. Pressure records from the esophagogastric junction demonstrate another zone of elevated pressure, the inferior esophageal sphincter. The sphincteric pressure is abolished shortly after swallowing, and sphincteric relaxation is followed by a wave of high pressure as peristalsis rolls through the sphincter. The inferior esophageal is the major mechanism which prevents reflux of gastric contents into the lower esophagus.

CLASSIFICATION OF ESOPHAGEAL MOTILITY DISTURBANCES

Any current classification of esophageal motility disturbances must be considered tentative. Information regarding normal and abnormal esophageal function is accumulating rapidly and will inevitably lead to clarification of hitherto poorly understood conditions. For purposes of discussion, it is

(Continued on next page)

F. HENRY ELLIS, JR., M.D., Ph.D., *Department of Thoracic and Cardiovascular Surgery, Lahey Clinic Foundation, Boston, Massachusetts.*

Presented in part at the Rhode Island Hospital, Providence, Rhode Island, January 27, 1973.

Table 1
Esophageal Motility Disturbances
Upper Sphincter

Central nervous system disease
Cerebrovascular accident
Bulbar poliomyelitis
Multiple sclerosis
Muscular disease
Muscular Dystrophy
Myasthenia gravis
Dermatomyositis
Tyrototoxic myopathy
Radical oropharyngeal surgery
Idiopathic incoordination
Pharyngo-esophageal diverticulum

Table 2
Esophageal Motility Disturbances
Body of Esophagus and Lower Sphincter

Hypomotility
Achalasia
Hypotensive inferior sphincter
Idiopathic
Hiatal hernia
Scleroderma
Operations on cardia
Hypermotility
Diffuse spasm of the esophagus
Hypertensive gastroesophageal sphincter
Localized esophageal spasm
Miscellaneous conditions
Dermatomyositis
Myasthenia gravis
Muscular dystrophy
Cerebrovascular accident
Parkinson's disease
Amyotrophic lateral sclerosis
Multiple sclerosis
Diabetic neuropathy
Alcoholic neuropathy

useful to consider separately those conditions affecting the upper sphincter and those affecting the body of the esophagus and lower sphincter (Tables 1 and 2).

Upper Sphincter. There is abundant evidence that swallowing difficulties may follow injury to the brain stem from such conditions as bulbar poliomyelitis or a cerebrovascular accident. Diseases that directly affect muscular activity also may result in swallowing difficulties, and the most common of these are listed in Table 1. Abnormalities of sphincteric relaxation are said to characterize central nervous system lesions, while the muscle diseases interfere with effective pharyngeal contraction. Cricopharyngeal myotomy has occasionally been used with success in such cases. Difficulty in swallowing has also been reported after extensive operations on the oropharynx, presumably because of impaired function of the cricopharyngeal muscle; cricopharyngeal myotomy has been suggested as a means of avoiding this complication.

Although the term "cricopharyngeal achalasia" has been suggested as applicable to some swallowing difficulties, particularly those associated with a pharyngo-esophageal diverticulum, esophageal motility studies have failed to provide confirmation. Rather, a type of incoordination has been observed in patients with upper esophageal pouches characterized by an abnormal temporal relationship between pharyngeal contraction and pharyngo-esophageal sphincteric relaxation and contraction. In these patients sphincteric contraction occurs before completion of pharyngeal contraction, suggesting a possible etiologic role and an alternative surgical approach to its management.

Body of the Esophagus and Lower Sphincter. Motility disturbance of the body of the esophagus and lower sphincter can conveniently be divided into those characterized by hypomotility and those characterized by hypermotility (Table 2). In addition there is in all likelihood a large group of miscellaneous conditions about which less is known.

Esophageal achalasia is the classic example of hypomotility disturbance. It is characterized by absence of peristalsis in the body of the esophagus and by failure of the inferior esophageal sphincter to relax in response to swallowing. Practically all patients complain of dysphagia, which may at first be intermittent but eventually becomes constant as the disease progresses. Pain is a relatively infrequent symptom occurring, if at all, only in the early stages of the disease. The symptoms of achalasia are contrasted with those of diffuse spasm of the esophagus in Table 3. The term "vigorous achalasia" refers to a patient whose disease has not yet reached the advanced stage of mega-esophagus and whose esophagus retains considerable contractile power. This patient shares some of the symptoms in common with a patient who has diffuse spasm of the esophagus; yet, in my opinion, the two diseases are quite different and can readily be differentiated by esophageal manometry. The roentgenographic appearance of the achalasic esophagus is that of obstruction at the cardia with proximal dilation and varying degrees of elongation and tortuosity, quite different from the appearance of the esophagus in patients who have a hypermotility disorder (Fig. 1a).

Another important hypomotility disturbance is that of a hypotensive inferior esophageal sphincter, a condition that facilitates gastroesophageal reflux, the symptoms of which include regurgitation and heartburn. Although a sliding esophageal

Table 3
Esophageal Motility Disturbances
Incidence of Symptom or Sign According to Diagnosis

Symptom or Sign	Achalasia	Vigorous Achalasia	Diffuse Spasm
Pain	Uncommon	Frequent	Almost always
Obstruction	Always	Nearly always	Sometimes
Regurgitation	Common	Frequent	Rare
Retention	Frequent	Frequent	Never
Nervousness	Uncommon	Occasional	Almost always
Radiologic findings			
Diffuse dilation	Common	Occasional	Never
Segmental spasm	Uncommon	Common	Frequent

hiatal hernia is a common accompaniment of a hypotensive inferior esophageal sphincter, it is by no means the only situation in which this hypomotility disorder may occur. The esophageal sphincteric pressure may be low for no obvious anatomic reason, or it may have been rendered hypotensive by a systemic disease such as scleroderma or by surgical manipulative procedures on the esophagogastric junction. Such operations as esophagogastrectomy, cardioplasty, improperly performed myotomy, or an overly vigorous forceful esophageal dilation will lower or abolish sphincteric pressures. Vagotomy and gastrectomy have also been associated with hypotension of the inferior esophageal sphincter.

The commonest hypermotility disturbance of the esophagus is that of diffuse spasm of the esophagus, a condition which is often associated with a hypertensive inferior esophageal sphincter. Rarely, instances of localized spasm of the body of the esophagus may be encountered. As indicated

in Table 3, differentiation from esophageal achalasia can usually be made clinically, for pain is far more pronounced in diffuse spasm, dysphagia occurring intermittently or not at all. The pain varies from a sensation of discomfort beneath the lower half of the sternum to severe colicky substernal pain extending through to the back or into the neck, shoulders, or arms, mimicking cardiac pain. Pain may be provoked by eating, or it may come on spontaneously, even awakening the patient at night. A patient so afflicted tends to be highstrung and nervous, and the diagnosis of psychoneurosis is often entertained. Symptoms are more likely to be troublesome than truly incapacitating. Even during an attack the patient seldom seems to be seriously ill.

Although it has been our experience that roentgenography of the esophagus will sometimes show normal findings in patients suffering from these disorders, the appearance is occasionally such as to explain the use of such terms as pseudodiverticulosis, functional diverticula, segmental spasm, or curling or corkscrew esophagus (Fig. 1 B). Epiphrenic diverticula and small diaphragmatic hernia may coexist. A definitive diagnosis can best be made by esophageal manometry, which demonstrates simultaneous, sometimes repetitive, and prolonged contractions of excessive magnitude in the lower half or third of the esophagus after swallowing. The sphincter, however, relaxes quite normally, differentiating the condition from esophageal achalasia in which the sphincter fails to relax after most swallowing efforts.

The wide variety of other diseases listed under miscellaneous conditions (Table 2) merely reflects the vulnerability of esophageal function to a wide range of systemic diseases. Much needs to be done to clarify the nature of the functional disorders, but, since they rarely have any surgical significance, they will not be discussed further here.

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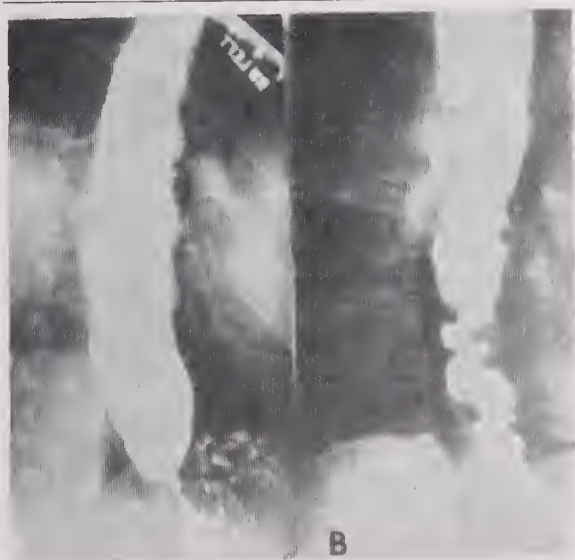


Fig. 1. Roentgenographic appearance of the esophagus in A, achalasia and B, diffuse spasm of the esophagus.



Fig. 2. Technique of cricopharyngeal myotomy. A, Site of incision. B, Exposure of diverticulum and site of myotomy. C, Completed myotomy. (Reproduced with permission from Ellis et al.⁴)

SURGICAL MANAGEMENT OF MOTILITY DISORDERS OF THE ESOPHAGUS PHARYNGO-ESOPHAGEAL DIVERTICULUM

Diverticulectomy has been the classic operation for an upper esophageal pouch for many years, and results following its use remain good.³ However, there is increasing interest in the procedure known as cricopharyngeal myotomy, particularly since evidence concerning incoordination of the upper sphincter in such cases has been presented.⁴ The technique is a simple one, surgical exposure being obtained through a cervical incision bordering the anterior edge of the sternocleidomastoid muscle (Fig. 2). The incision is deepened between the carotid sheath laterally and the thyroid gland and trachea medially so as to expose the pouch which is isolated to its neck following which the cricopharyngeal muscle and several centimeters of the proximal esophagus are incised through the muscular wall down to the mucosa. After the myotomy the esophageal and cricopharyngeal muscles are dissected from the underlying mucosa about half the circumference of the mucosal tube to allow it to protrude freely through the incision. The cervical incision is closed in the usual way without drainage, and the patient begins oral feedings immediately and can be dismissed from the hospital in a few days. This technique has been accompanied by excellent results in patients with small to moderate sized pouches. Those in whom the pouch exceeds 4 cm in diameter should be treated by concomitant diverticulectomy.

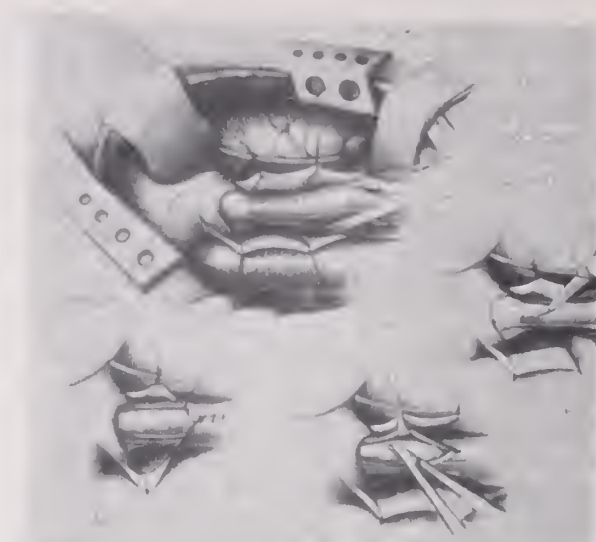


Fig. 3. Technique of esophagomyotomy for esophageal achalasia. A, Transthoracic exposure indicating site of the myotomy. B, Performance of myotomy. C, Freeing of muscle from mucosa. D, Closure of mediastinal pleura. (Reproduced with permission from Ellis et al.⁵)

Esophageal Achalasia. Forceful dilation of the esophagogastric junction is considered by many as the primary treatment of choice for esophageal achalasia. I believe esophagomyotomy (modified Heller operation) is a preferable form of treatment, for the initial results are better and recurrences rare. If the procedure is properly performed, reflux esophagitis should be a rare sequela.⁵

The modification of the Heller procedure that I employ involves a longitudinal incision through the muscle layers of the distal esophagus using a thoracic approach (Fig. 3). The incision is carried onto the stomach only far enough to ensure complete division of the distal esophageal musculature. The mucosa is freed in such a way as to allow it to pout through the incision. To avoid a post-operative diaphragmatic hernia, damage to the esophageal hiatus and its supporting structure should be avoided. The addition of such ancillary procedures as vagotomy and pyloroplasty or fundoplication is unnecessary. Approximately 94 per cent of patients operated on by this technique have been improved by the operation, and the incidence of significant reflux esophagitis is less than 5 per cent.

Hypotensive Inferior Esophageal Sphincter. A number of operative procedures have recently been introduced whose primary goal is restoration of gastroesophageal competence by enhancing sphinc-

teric pressure. These procedures have been titled by the names of their proponents and include the Belsey Mark IV operation, the Hill posterior gastropexy, and the Nissen fundoplication. My preference has been for the Nissen fundoplication, an operation which can be used to correct reflux in patients with a hypotensive inferior sphincter regardless of its cause.

An upper midline incision is preferred unless there have been previous transthoracic operations or there is shortening of the esophagus (Fig. 4). After freeing the left lobe of the liver, the esophagus is mobilized, and the hernia, if present, is reduced. In order to provide adequate fundus to permit performance of a fundoplication, mobilization of the upper part of the stomach is mandatory and includes division of the lesser omentum and occasionally some of the short gastric vessels with freeing of the fundus from its posterior attachments to the abdominal parietes. It is then a relatively simple matter to envelop the distal few inches of esophagus with adjacent fundus, which is maintained in place by silk sutures placed through the adjacent serosal margins catching some of the anterior wall of the esophagus as well in order to maintain proper position.

Following this procedure approximately 90 per cent of patients are relieved of their symptoms. When the operation is properly done over a large caliber indwelling tube, the so-called gas-bloat syndrome should rarely occur. Manometric studies after operation have revealed a threefold increase in amplitude in lower esophageal sphincteric pressure which has been maintained over a follow-up period of several years.⁶

Diffuse Esophageal Spasm. Patients with diffuse esophageal spasm who are severely symptomatic are treated by an operation similar to that used for patients with esophageal achalasia. The myotomy is more extensive, however, its limits being defined before operation by the extent of the disease as determined by esophageal motility studies. Occasionally the incision may reach the aortic arch. The incision need not be extended onto the stomach if the inferior sphincter is not hypertensive, but, as in a myotomy for achalasia, care should be taken to avoid a postoperative hiatal hernia. The frequent association of a sliding hernia with diffuse spasm often requires concomitant hiatal hernia repair. The results of an extended myotomy for diffuse spasm are not as good as those following esophagomyotomy for achalasia of the

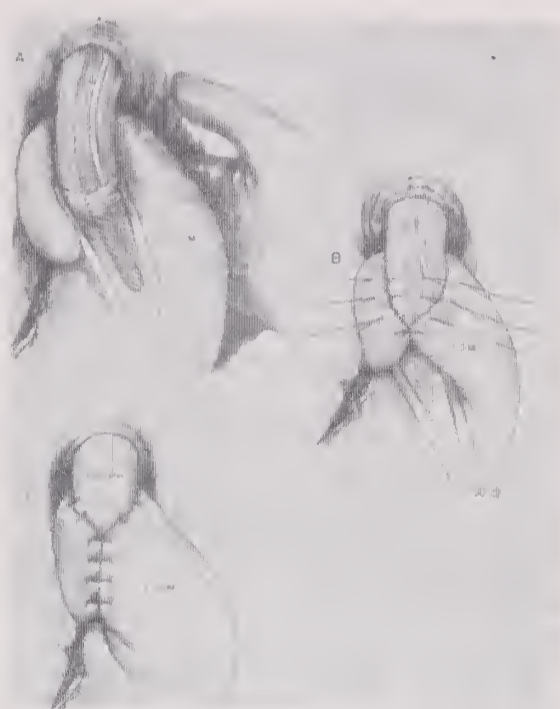


Fig. 4. Technique of fundoplication. A, Fundus being wrapped around distal esophagus. B, Placement of sutures. C, Completed procedure. Note large caliber indwelling nasogastric tube.

esophagus, only 70 to 80 per cent of the patients so treated being benefited.⁷ For this reason patients should be selected carefully for operation. The ideal candidate is an emotionally stable individual with serious disability from the disease but without evidence of associated gastrointestinal problems. There should be clear evidence of the severity of the disease in the form of a markedly abnormal esophageal motility pattern ideally associated with roentgenographic evidence of esophageal spasm.

SUMMARY

Motility disturbances of the esophagus are being recognized with increasing frequency, and their pathophysiology is being clarified. By classifying these disorders, both as to anatomic site and as to whether hypermotility or hypomotility predominates, surgical treatment can be selected properly. Esophagomyotomy has been found useful in the treatment of pharyngoesophageal diverticula, esophageal achalasia, and diffuse esophageal spasm. Normal pressures can be restored to a hypertensive inferior esophageal sphincter by sphincter-enhancing operations such as the Nissen fundoplication.

605 Commonwealth Avenue
Boston, Massachusetts 02215

(Concluded on page 531)

Medical Periodicals of Rhode Island: Part I.

Transactions of the Rhode Island Medical Society

*This Publication Appeared During The
Years 1859 Through 1912*

By James E. Bobick

During the past centuries medical societies have developed considerably, beginning with small gatherings of men with common interests. Some groups have flourished as large organizations with many members, museums, libraries, and other facilities. The growth of these societies has been tremendous, ranging from international and national to local groups and smaller gatherings. They have proved invaluable as centers for discussion and have greatly influenced medical literature.

The Rhode Island Medical Society, founded in 1812, is the eighth oldest state society. Its 150th anniversary was observed in 1962 with the publication of *THE HISTORY OF THE RHODE ISLAND MEDICAL SOCIETY AND ITS COMPONENT SOCIETIES, 1812-1962*. The Rhode Island General Assembly in February approved a petition to charter the state medical society. The organizational meeting of the Society was held in Providence on April 22, 1812, and Amos Throop was elected President. William A. Bowen was elected Librarian and

Cabinet Keeper. The first annual meeting of the Rhode Island Medical Society was held in Providence at the Court House on September 1, 1812.

FIRST OFFICIAL PUBLICATION

The official journal of the Rhode Island Medical Society began in 1859. In the previous year the Committee on Publication charged the members of the Society to prepare biographical and medical sketches of distinguished deceased members. This project was chaired by Usher Parsons with the aid of Isaac Ray and George L. Collins.

In 1859 a pamphlet of 64 pages with the cover title "Sketches of Rhode Island Physicians, Deceased Prior to 1850: Prepared by Usher Parsons, for the Rhode Island Medical Society" was published, designated on the title page as Volume I of the *Transactions of the Rhode Island Medical Society*.¹ The leaf following the title page contained the further description of "History of the Medical Profession in Rhode Island".²

Pages three to 55 consisted of "Sketches of the Lives of Early Physicians". The entries varied from a single line to several pages. The three lengthiest biographies were for Levi Wheaton (pp. 19-25). Solomon Drowne (pp. 25-34), and David King (pp. 50-55). John Brett was listed as a pupil

MR. JAMES E. BOBICK, *Biological and Medical Reference Librarian, Sciences Library, Brown University, Providence, Rhode Island.*

This is the first of a three part series. Later installments will cover other Rhode Island medical publications.

of Boerhaave and one individual who cooperated with Abraham Redwood to establish the Redwood Library in Newport.³ Doctor William Bowen was mentioned as the person who petitioned for the charter to form the Rhode Island Medical Society and was the second President of the new group.⁴

Doctor Caleb Fiske was mentioned "as a former President and a lasting benefactor to this Society".⁵ It was "his intention to provide a fund, the annual income of which is intended to excite competition in the investigation of such medical subjects as the Society may propose for discussion".⁶ The first two awards were presented in 1835 in response to the following questions:⁷

1. What are the causes and nature of Rheumatism, and the best mode of treatment to be employed therein?

Award of forty dollars to Thomas H. Webb.

2. What are the causes and nature of Purpura Hemorrhagica, and the best mode of treatment to be employed therein?

Award of forty dollars to David King, M.D., of Newport."

Interestingly, it was also David King who performed the first vaccination in the state. The patient was Walter Cornell of Newport, and the date was October 1800.⁸ Integrated with the biographical and medical sketches was substantial material on conditions during the early colonial and revolutionary periods.

The remaining pages of Parsons's pamphlet included information on "Medical Education in Rhode Island", the names of the recipients of the "Fiske Fund Prize Essays" along with the respective topics from 1835 to 1858, "Registration Reports", and a listing of Society officers.⁹ Although marked Volume I, the original 64 page publication prepared by Usher Parsons was actually No. I of Volume I of the *Transactions of the Rhode Island Medical Society*. Numbers two through nine of Volume I were issued as *Communications of the Rhode Island Medical Society*. These eight issues covered the years 1860 to 1877.

The *Communications* were issued under the direction of a Committee of Publication. Each issue contained on its cover the names of the three or four committee members. The total number of pages published as *Communications* was 474. An additional 132 pages unevenly distributed throughout each issue as a second section covered the quarterly, semi-annual, and annual meetings of the Rhode Island Medical Society.

Addresses read before the Society, case reports, as well as proceedings of meetings, treasurer's reports, listings of officers, and similar matters were contained in each publication. The second issue of Volume I contained the following resolution proposed by Usher Parsons:¹⁰

"that a committee of three be appointed to look for and engage a room in the city of Providence, for the accommodation of the library, cabinet and manuscripts, and for holding the meetings of this Society, at an expense not exceeding seventy-five dollars a year".

The treasurer's report published in the same issue listed an expenditure of \$54.40 for printing the *Transactions*.¹¹ This expense refers specifically to the 300 copies of Parsons's pamphlet.

Volume I, No. 4 contained a note that acknowledgements were received from the Redwood Library, the American Antiquarian Society, and the New York State Library for receipt of the Society's publications.¹² The "Report of the Committee of the Rhode Island Medical Society on the Plan of the Rhode Island Hospital" appeared in issue No. 5, Volume I.¹³ An inventory of Society publications which appeared in this same issue stated that 92 of the original 300 pamphlets prepared by Parsons and published as Volume I, (No. 1) of the *Transactions* were still available.¹⁴ It is worth noting that the fourth and fifth issues of Volume I were the only ones that actually contained No. 4 and No. 5 imprinted on the upper left hand corner of the cover.

An interesting account of alcohol was presented by L. F. C. Garvin in the *Communications* covering the years 1865 to 1872. One concluding paragraph was:¹⁵

"In consideration of the scientific facts known to the profession, and the daily effects known to all men, we believe it both a right and a duty to stop the sale of stimulating beverages by irresponsible persons, and to confine them to their proper place in the drug store."

In that same issue Edward T. Caswell presented a lengthy historical account of Jenner and his work with vaccination.¹⁶ A number of obituaries usually appeared in each issue of the *Communications*. For the issue under consideration there was one for Usher Parsons. It was noted that he was surgeon of O.H. Perry's flagship, the *Lawrence*, during the battle on Lake Erie.¹⁷

At the Society's semi-annual meeting in Providence
(Continued on next page)

dence on December 16, 1868, it was voted to present all books, instruments, apparatus, and preparations to Rhode Island Hospital.¹⁸ A Centennial Essay titled "The Premature Death of Great Men" was presented by Lucius F. C. Garvin at the quarterly meeting on March 15, 1876.¹⁹ Garvin was followed by Doctor Robert F. Noyes who read a paper titled "Omne Vivum ex Parentibus".²⁰ The minutes of this meeting indicated that this "paper was a well prepared exposition of the theory of 'Spontaneous Evolution', or 'Equivocal Generation'".²¹ The minutes further reported that 400 copies of the *Communications* would be published.²²

The ninth, and final, issue of Volume I contained a complete index of major addresses and cases, obituaries, and proceedings which had been published as separately paged sections in the individual issues.²³ A report presented at the 65th Annual Meeting held on June 14, 1876 showed that there were 84 registered pharmacists and 30 registered assistant pharmacists in the state.²⁴ The minutes of the March 21, 1877 meeting reported that "suitable accommodations for books, journals and publications, may be obtained at the Franklin Lyceum rooms for the sum of \$35.00 a year."²⁵ The Committee on Publication further recommended "that efforts be forthwith made by the Society to form the nucleus of a library, and a committee be appointed to take the matter into consideration."²⁵

The report of the recording secretary for the year ending June 13, 1877 stated that "39 copies of the 'Communications' have been sent to the various State societies and others" and that a total of 33 volumes had been received in exchange.²⁶ The treasurer's report of the same date showed that only 29 copies of "Sketches of Rhode Island Physicians" were "on hand,"²⁷ considerably fewer than the 92 available in 1864.

An appendix to the final issue of Volume I of the *Communications* contained the text of "The Act of Incorporation of the Rhode Island Medical Society, together with the By-Laws, as Amended June 13th, 1877, and List of Members."²⁸ This was also the first issue to contain advertising, consisting of five pages which described patent medicines. In addition, there were full page announcements (on both sides of the back cover) of the academic year courses at Bellevue Hospital Medical Center and Jefferson Medical College. The expenses for the regular session at Bellevue were:

Fees for tickets to all the lectures during the preliminary and regular term, including clinical lectures	\$140.00
Matriculation fee	5.00
Demonstrator's ticket (including material for dissection)	10.00
Graduation fee	30.00

The format observed in the nine issues comprising the first volume of the *Transactions*, i.e., *Communications of the Rhode Island Medical Society* was to be followed fairly closely until this publication ceased in 1912. Collectively, eight volumes were published between the years 1859 and 1912. The following summarizes the volumes and the inclusive years:

Volume and Issues	Years Covered
I (9 issues)	1859-1877
II (6 issues)	1877-1882
III (6 issues)	1883-1888
IV (5 issues)	1889-1892
V (5 issues)	1894-1898
VI (5 issues)	1899-1903
VII (6 issues)	1904-1909
VIII (3 issues)	1910-1912

Beginning with Volume II the original title dating back to 1859 of *Transactions of the Rhode Island Medical Society* was adopted and employed until 1912. Therefore, only issues two through eight in Volume I were published as *Communications of the Rhode Island Medical Society*.

VOLUME II OF THE TRANSACTIONS

Volume II consisted of six parts covering the years 1877 to 1882. The total number of pages published was 559. Also, with this and later volumes there was one continuous pagination. The proceedings of meetings and original contributions were no longer paged separately. Generally speaking, the proceedings appeared in the initial pages of an issue while the addresses, case reports, and similar material followed.

Advertisements for pharmaceutical preparations appeared more frequently as well as descriptions of apparatus and materials used by physicians. Descriptive information and advertisements from McKesson & Robbins, Wyeth, and Parke-Davis appeared regularly. Additional medical departments placed notices of instructional programs. Yale, Dartmouth, Vermont, and Bowdoin were new listings, while the one for Bellevue had appeared earlier. The comparative costs were: Yale, \$235; Bellevue, \$185; Dartmouth, \$147; Vermont, \$100. Fees for Bowdoin were not listed.

Similarly, advertisements for medical books as well as book dealers made their appearance in Volume II of the *Transactions*. The advertisement

for Stephen Smith's *A MANUAL OF THE PRINCIPLES AND PRACTICE OF OPERATIVE SURGERY* (Houghton, Mifflin) included reviews from distinguished physicians. A typical endorsement is that of Gross:²⁹

"Are you aware that you have produced a great book? If not, let me assure you of the fact. I believe I am perfectly familiar with the literature of surgery, and if there is any work of the kind equal to yours in any language, I am not acquainted with it. This is saying a great deal, but only what is strictly true. The work, considered as a whole, does you infinite credit, and cannot but be regarded as a most valuable addition to the surgical literature of our country.

—PROF. S. D. GROSS, Professor of Surgery in Jefferson Medical College, Philadelphia, Pa."

A notice to the Fellows of the Rhode Island Medical Society soliciting gifts of books and journals was placed in the 1880 issue of the *Transactions* by the Library Committee and George D. Hersey, Librarian.³⁰ The following issue contained a full page announcement of 39 recent acquisitions to the Library of the Rhode Island Medical Society together with the note that "about 1,800 volumes are now accessible".³¹

At the quarterly meeting of September 19, 1877 Doctor T. Newell, Chairman of the Special Committee on Hall and Library, presented several recommendations. One was the establishment of a "library standing committee" and an annual assessment of \$1.00 per member to be added to the library treasury fund.³²

The annual report of the secretary, dated June 12, 1878, listed the active membership of the Society as 159 and the honorary membership 24.³³ At the quarterly meeting on December 19, 1878 "Doctor Caswell exhibited a specimen number of the *Index Medicus*, a monthly journal published by Surgeon General Billings".³⁴

Extensive reports from the Library Committee and Publication Committee appeared in each issue of the *Transactions*. Among the items considered in detail were gifts, exchanges, library holdings, publication costs, and advertisement income. The annual report of Doctor W. O. Brown, Chairman of the Committee on Publication, contained a note that the secretary of the Society "has received a copy of the transactions of the medical societies of every state in the Union, excepting Nevada, which has no medical society, we are informed".³⁵

Three articles from the second volume of the

Transactions are of interest: "Trephining in Epilepsy", by Charles O'Leary³⁶; "A Case of Removal of Both Ovaries by Abdominal Section", by Anita E. Tyng³⁷; and "Malaria in Providence", by C. V. Chapin.³⁸ The case report by Doctor Tyng was the first accompanied by journal citations to appear in the *Transactions*. The obituary notice and list of writings published by Isaac Ray, associated with Butler Hospital, appeared in the 1881 *Transactions*.³⁹

EXPERIMENT WITH ADVERTISING

Volume III of the *Transactions of the Rhode Island Medical Society* covered the years 1883 to 1888 and consisted of six parts. The number of pages published was 592. The already mentioned features and format were essentially the same. Advertising was expanded to include insurance agents, lists of "trained nurses" and their educational backgrounds,⁴⁰ and subscription prices to medical periodicals. The Franklin Bookstore of Providence offered these titles among others:⁴¹

Boston Medical and Surgical Journal	\$4.50 year
Medical Times, Philadelphia	\$3.50 year
Physician and Pharmacist	\$1.75 year
Cancer Journal	\$1.00 year

Three articles generally related to public health, one of an historic nature, appeared in the third volume of the *Transactions*. Edwin M. Snow wrote the "Early History of Vaccination in Providence". His paper was followed by a facsimile copy of "Cow-Pock Inoculation" which was described as a "Hand-bill distributed by a committee of the town of Providence, 1810".⁴² The other articles of interest in public health were G. Taber Swarts' "Statistics of an Investigation of the Premises and Habitation of Three Hundred Cases of Typhoid Fever Occurring in Providence, During the Winter of 1882-1883"⁴³ and "The Anticipatory Treatment of Local Epidemics" by H. R. Storer.⁴⁴

The "First, Second, Third, Fourth and Fifth Annual Reports of the Librarian; 1879-1884" were presented by George D. Hersey in the 1884 *Transactions*.⁴⁵ The annual growth of the Library was:

1879-1880	600 vols.
1880-1881	993 vols.
1881-1882	501 vols.
1882-1883	409 vols.
1883-1884	1083 vols.
Total	3586 vols.

Exchange items, gifts, the card catalog, and other topics were considered in detail. The quarterly meeting of September 13, 1888 contained a note
(Continued on next page)

that the Library had 7,300 bound volumes and "a very large number of pamphlets". Furthermore, the Library "receives regularly one hundred periodicals, and has now complete files of nearly all the medical journals that have been published in English for the past one hundred years".⁴⁶

A more complete report of the Library Committee from the previous issue of the *Transactions* was as follows:⁴⁷

"The Committee on the Library present their eighth annual report: During the year ending May 31, 1887, the Library received 1014 accessions, from the following sources:

From gifts	688 vols.
From exchanges	92 vols.
From transfer by binding	185 vols.
From purchases	42 vols.
Source unknown	7 vols.

Total gain	1014
Reported last year	5630

Total, May 31, 1887 6644

An interesting sketch by James H. Eldridge titled "Reminiscences of Fifty Years in the Rhode Island Medical Society" appeared in the 1888 *Transactions*.⁴⁸ An appendix to this paper contained a complete list of the Fiske Fund Prize Essays from 1835 to 1888. The most recent recipient was Charles V. Chapin who in 1888 was awarded \$200.00 for his presentation on the topic: "What changes has the acceptance of the germ theory made in measures for the prevention and treatment of Consumption?"⁴⁹ It is worth noting that Chapin also won on four previous occasions.⁵⁰

1880. XXI. The sympathetic nerve; its relation to disease.

Award of two hundred dollars . . .

1884. XXXII. The origin and progress of malarial fever now prevalent in New England.

Award of three hundred dollars . . .

1885. XXXIII. The present state of the germ theory of disease.

Award of two hundred dollars . . .

1886. XXXV. The methods and practical results of treatment of the malarial diseases now prevalent in New England.

Award of two hundred dollars . . .

Volume IV of the *Transactions* issued between 1889 and 1893 was in five parts consisting of 637 pages. The continued growth of the Rhode Island Medical Society Library through these years was

again evidenced by the number of recently added volumes. However, the financial status of the Library appeared to be precarious. At the quarterly meeting held on March 14, 1889 the following was recorded:⁵¹

"Doctor H. G. Miller spoke of the financial status of the Society, and said the circulars recently sent to each Fellow of the Society, asking for subscriptions for the maintenance of the Library, had resulted thus far in the sum of \$60. Also that the Library Committee were desirous of paying several bills, but were unable to do so. The great intrinsic value of the Library was spoken of and the importance of providing means for its support and future development.

Upon motion of Doctor Miller it was voted that the Library Committee be authorized to draw upon the Treasurer of the Society to the amount of \$300".

The annual address delivered by George L. Collins at the June 9, 1889 meeting was titled "State Control of Medical Practice".⁵² Articles on public health, especially typhoid fever, continued to appear, such as Gardner T. Swarts's "The Bacillus of Typhoid Fever"⁵³ and "Some Points in the Etiology of Typhoid Fever" by Charles V. Chapin.⁵⁴ The total membership of the Rhode Island Medical Society as of December 31, 1889 was 208. The 1889 *Transactions* was the last issue to contain advertisements.

In the past, the address delivered at the annual meeting had usually been on a scientific topic or original investigation. Doctor John W. Mitchell departed from this format at the June 12, 1890 meeting, speaking on "The Rhode Island Medical Society".⁵⁵ In this address special consideration was given to Doctor Amos Throop, the first President of the Society. Still another innovation appeared in the 1890 *Transactions*. W. L. Munro's "An Unique Exanthem Following an Acute Attack of Epidemic Influenza" was accompanied by a full page "chromo-lithographic illustration" reproduced from the July 1891 issue of *The Journal of Cutaneous and Genito-Urinary Diseases*.⁵⁶ It should be mentioned that the 1890 *Transactions* were published in 1891; hence, the inclusion of the 1891 illustration.

At the quarterly meeting held on September 1, 1892 the secretary read a copy of two resolutions received from the Medical Society of Pennsylvania which had been adopted by that group in May 1892. The full text was:⁵⁷

Resolved, That the Medical Society of the

State of Pennsylvania hereby expresses its highest disapprobation of the practice of giving certificates or testimonials to secret preparations alleged to be of medicinal virtue, and calls the attention of the affiliated county societies to the fact that such action on the part of members of the said societies is in derogation of the dignity of the profession, and in violation of the letter and the spirit of the Code of Ethics of the American Medical Association and of this Society.

Resolved, That this Society likewise expresses its disapprobation of the practice of inserting advertisements of secret preparations in the columns of medical journals, such action being an insult to the intelligence of the profession, and a degradation of journals indulging therein to the level of the patent medicine almanac. Especially to be condemned is the action of the *Journal of the American Medical Association* in admitting such advertisements".

No action was taken (by the Rhode Island Medical Society) regarding this matter.

The report of the Committee on the Library for the year ending May 31, 1891 listed 396 accessions and the total number of volumes as 9,420. It was also stated that "a copy of Cuvier's HUMAN ANATOMY in five folio volumes" was received from the library of Doctor Charles W. Parsons.⁵⁸ The minutes of the December 7, 1893 quarterly meeting contained a request from the publishers of the *Rhode Island Medical Science Monthly* to:⁵⁹

"publish the proceedings of the Society and, being prompted by a desire to give correct, full and true reports of the meetings, reports that shall be satisfactory to all parties concerned, we most earnestly request that the privilege be granted us to have our stenographer present to take down the proceedings of the various meetings".

APPEARANCE OF OTHER PUBLICATIONS

This new journal, the *Rhode Island Medical Science Monthly*, was the first medical journal published in Rhode Island. It was founded in 1893 and continued publication until October 1894. At that time the title was changed to the *Atlantic Medical Weekly* and continued until 1898. Collectively, 10 volumes were published; Volumes 1 and 2 (1893-1894) as the *Rhode Island Medical Science Monthly* and Volumes 3 through 10 (1894-1898) as the *Atlantic Medical Weekly*.⁶⁰ In 1900 the Providence Medical Association began the

quarterly publication of the *Providence Medical Journal*. Between 1900 and 1916, 17 volumes were issued under this title. These publications, as well as the present *Rhode Island Medical Journal*, will be considered more completely in later parts of this series.

The fifth volume of the *Transactions* issued from 1894 to 1898 consisted of 660 pages published in five parts. Doctor W. J. McCaw reported at the March 5, 1896 meeting that "the specimens belonging to the Society had been transferred for safe keeping to the Museum of Brown University . . . and are properly arranged and labeled, and are accessible to the Fellows of the society at any time".⁶¹ It had been recorded earlier that:⁶²

"the use and the usefulness of the library are gradually increasing.. During the past year its privileges have been granted to the students and professors of Brown University. It is a pleasant to record that every book taken by them has been promptly returned when due, which has not always been the case with those taken by members of the Society".

Among other items of interest related to Brown University was a report of a demonstration by Professor H. C. Bumpus of "the X rays, and after adjournment an opportunity was . . . to witness the operation of the Holtz machine".⁶³ It was later reported that Alpheus Spring Packard, M.D., Ph.D. and Hermon Carey Bumpus, Ph.D., both of Brown, were elected Honorary Members of the Society.⁶⁴

The following information was abstracted from the minutes of the quarterly meeting of December 3, 1896:⁶⁵

"A communication was received from the Pasteur Monument Association of the United States requesting the cooperation of the Society in collecting a fund for the purpose of erecting a monument to the late M. Pasteur in Paris.

The Secretary was authorized to receive and forward subscriptions."

An article on "Compulsory Vaccination" by L. F. C. Garvin also appeared in the *Transactions* of 1896.⁶⁶ It is of particular interest that an authorization was approved for 5,000 copies of this paper to be printed for free distribution.⁶⁷

H. G. Miller's Annual Report of the Committee on the Library for 1896 included the following:⁶⁸

"Continued experience with the wants of busy practitioners, essay writers, and students engaged in original research, shows that periodicals
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(sic). including Society Transactions, and the annual Hospital and Health Reports, form the most useful section of the library. It is the living, up-to-date part of medical literature; always in demand. The growth of our library has fortunately been almost wholly in this direction, making our collection of special convenience and value for reference purposes."

Among the obituaries in the same issue was that of Annie News. It is noteworthy that it began with this phrase:⁶⁹

"To the Rhode Island Medical Society belongs the honor of being the first among the State medical societies to elect a woman to its fellowship"

It appears that the members found it pleasing to reminisce about the early days of the Society and its members as yet another historical paper (see reference 55) titled "The Rhode Island Medical Society of Fifty Years Ago", written by J. W. C. Ely, was published at this time. Several humorous anecdotes of Doctor Lewis L. Miller and others were presented.⁷⁰

A FAMOUS ADDRESS BY OSLER

Volume VI of the *Transactions*, dated 1899 to 1903, consisted of five parts comprising 696 pages. The Annual Address, delivered at the December 7, 1899 meeting was given by William Osler. The title was "A Rhode Island Philosopher (Elisha Bartlett)".⁷¹ The following is a footnote from that address:⁷²

"Parsons closes his HISTORICAL TRACT ON THE BROWN UNIVERSITY MEDICAL SCHOOL with the sentence, 'Whether this city, the second in New England, shall become the seat of such a school (that is, a revived department of medicine) must depend very much on the zeal, persistence and ability of its physicians.' May I be permitted to remark, Mr. President, that the existing conditions are singularly favorable for a small first-class school. Here are college laboratories of physics, chemistry and biology, and modern hospitals, with 300 beds. What is lacking? Neither zeal, persistence nor ability on the part of the physicians, but a generous donation to the University of a million of dollars with which to equip and endow laboratories of anatomy, physiology, pathology and hygiene. These alone are lacking; the preliminary scientific school is here; the clinical school is at your doors; the money should be the least difficult thing to get in this plutocratic town. The day has come for small medical

schools in university towns with good clinical facilities."

The next Annual Address following that of Osler delivered on September 6, 1900 by George D. Hersey, was titled "The Medical Library as a Factor in Medical Progress."⁷³ The development of the Rhode Island Medical Society Library was traced, and a concluding paragraph emphasized the symbiotic relationship between the library and the laboratory.

Interaction between the Society and Brown University appeared to continue beyond the previous informal arrangements. Volume VI of the *Transactions* contained three papers by Brown professors. They were: "Rhode Island's Poisonous Plants" by William Whitman Bailey,⁷⁴ "The Effects of Chemical and Physical Influences on the Development of the Embryo" by A. D. Mead,⁷⁵ and "The Relation of Mental Content to Nervous Activity" by E. B. Delabarre.⁷⁶

The obituary notices printed in the 1903 *Transactions* included that of Oliver Chase Wiggin. "The Providence Lying-In Hospital was organized largely by his initiative and efforts, and he served as its first president from 1884 until . . . 1891."⁷⁷

There were six parts to Volume VII of the *Transactions*, issued from 1904 to 1909. These issues had a total pagination of 889. The Library Report for 1904 stated that:⁷⁸

"One hundred and seventy-five periodicals are received regularly. Of these, one hundred and sixty are American and fifteen are foreign. There are still others which appear irregularly." It was also reported that:⁷⁹

"Among the additions to the library during the year, the most notable is that given by Doctor Charles V. Chapin, of books connected with sanitary science, in which he is so well known an authority. A vast number of periodicals and bound volumes containing the transactions of various boards of health and associations interested in sanitary science, have been contributed by him, and these, with our previous acquisitions in that line, make our library among the foremost in the country, to those interested in investigations in that direction."

Papers on mental illness began to appear in the *Transactions* more frequently, such as William F. Gleason's "Education of the Feeble Minded"⁸⁰ and "The Lay Treatment of the Insane in Rhode Island" by Henry A. Jones.⁸¹ A list of officers of

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America's No. 1 Crisis

The Moral Ideal Of Self-Discipline And Acceptance Of Standards Is Reaffirmed

By Rev. Joseph L. Lennon, O.P.

Not long ago, addressing the Providence Rotary Club, Senator John O. Pastore declared that the problem of energy was the No. 1 crisis facing America. With due deference to the distinguished, senior Senator from Rhode Island, I submit that the major crisis we face today is moral. To substantiate my thesis, do not expect me to tick off the dismal statistics of dishonesty, crime, cheating, vandalism, perjury, graft, payola, kick-backs, indictments, convictions or other offences. Nor do I intend to discuss the decay of decency, the moral bankruptcy of our times, nor the web of deception and power-grabbing known as Watergate.

Perhaps we *are* becoming a nation of smooth-faced, soft-spoken, middle-aged boys, hustlers, and packagers, loyal not to profoundly held personal convictions but to what is becoming a golden rule in America: "To get ahead, go along." All these scandals, however, are symptomatic of a deeper, ethical malaise.

HISTORICAL PERSPECTIVE

No age has ever been free from violations of its

REV. JOSEPH L. LENNON, O.P., *Vice President for Community Affairs, Providence College; Member, Board of Directors, Rhode Island Blue Shield.*

Address Delivered at Providence Rotary Club luncheon, July 31, 1973.

accepted code. Take Puritanism. The records of a Boston church from 1760 to 1775 show that of the 200 persons wanting to wed, 66 confessed to fornication before marriage. Perhaps this represents a law of averages in Puritan pre-marital sex sins. But to transgress accepted values is one thing; to lose all sense of an objective moral order is quite another. This is precisely the present predicament. The unique feature of the current moral crisis is not so much a widespread violation of standards as it is the rejection of the idea that there are any standards. Many of the young and middle-aged in our society are ideologically naked. That is why any analysis that spends time wringing hands over the immorality of our times as compared with the so-called "good old days" fails to connect. Let the Cassandras cry out "O tempora, O mores!"

If we believe what we see and what social scientists tell us it seems clear that an eat-drink-and-be-merry philosophy is abroad in the land. This is understandable. When the future is too uncertain or too bleak, past values and beliefs do not hold a person to a patient or cooperative approach to life. Instead, there is an emphasis on everyone getting what he believes is rightfully his, and on getting it *now*. A psychology of immediacy holds sway; the need of the moment becomes para-

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mount. In such a *now* world one finds little commitment to the larger community or to the high ideals of integrity, honesty, and service to others. Self-indulgence becomes the order of the day. Frank Sinatra sums it up pretty well. He said: "I'm for anything that gets you through the night, be it prayer, pills, or a bottle of Jack Daniels."

INSTANT GRATIFICATION

The young, especially, seem to be sensitive to the meaning of the *now* life. After all, they learn from the society in which they live, and Americans are in the forefront in the chase for instant gratification. While Mom and Dad are gaining instant relief from headaches, constipation, fatigue, insomnia, and depression, it should not be surprising if Junior thinks he can gain instant knowledge of God, enjoy instant sex simply by dropping a pill, or solve intricate human problems in 30 minutes as they do on television. There is even instant prayer (dial-a-prayer) and instant ordination for would-be ministers (the Rev. Hensley of the Universal Life Church, according to his own claim, has processed 450,000 ordinations by mail).

Indeed, Americans are so awash in miracle pills and potions that we now crave shortcuts even on roads that have no bend. In learning, for example, people are duped into believing that they can get-rich-quick mentally. So we read condensed books, classic comics, capsulized histories, brief biographies and take five-day courses in mind control and transcendental meditation. Outlines of economics, psychology, philosophy; primers on relativity; ABC's of atomic theory — all provide a superficial smattering of knowledge which parades as wisdom.

Indeed, campus unrest in large measure is created by the fact that young people clamor for instant learning. The grubbing for facts and the digging in sources is disdained as being tedious and niggling. With an attitude like this, college education comes to be looked on as a bag of tricks, mastery of which will bring early success, a kind of secret magic, knowledge of which will immediately transform one's personality and confer fame and fortune. No wonder, then, that discontent and disillusionment set in when the college fails to come up with the abracadabra for shortening time and effort and producing instant wisdom.

NO SHORTCUTS

As an educator, let me assure you: there is no way to eliminate time and effort in the learning

process. Shoddiness results when shortcuts are sought in matters of mental growth. The only time wasted in education is time spent trying to save time. The same could be said for spiritual growth and general maturity. No matter what the Jesus freaks say, there's just no way to become a saint over night; nor do you blossom into a beautiful mature personality merely by following the instructions of a Norman Vincent Peale or a Kahlil Gibran.

Don't misunderstand me: I am not opposed to instant results where feasible, nor am I asserting that instant gratifications are wrong, but I am saying that some goals are realized only after prolonged work and effort, that in order to achieve long-range objectives we have to defer present satisfactions, that the finest things in life — unselfish service, love and sacrifice — show themselves in the face of obstacles, reverses, tragedies, that discipline and self-restraint are the price one should be willing to pay to achieve noble ideals and laudable goals.

This theme is not new. The church has always taught the value of sacrifice as a means to an end. St. Paul says, "For the joy that is set before us, we endure the cross." But church influence has dwindled. Indeed, the church today is not so much despised and opposed; it is simply ignored. It is derided for being irrelevant to both personal fulfillment and the good society. Organized religion — Protestant, Catholic and Jewish — can brag of very little success in stopping the rising tide of indifferentism that is emptying the churches and finding expression in huge numbers of Americans who declare themselves to be unaffiliated with any religious denomination. Since religion, traditionally, has always defended, supported, and promoted moral behavior, its diminished influence has undoubtedly contributed to the moral crisis we now face.

A LITTLE LARCENY

Of course, few would deny that pressures forcing a man to do wrong in our society are strong — so strong that he often falls in with the theme of the hit song from *MY FAIR LADY*:

With a little bit of luck
With a little bit of luck
When temptation comes you'll give right in.

Indeed, a recent Gallup Poll painfully makes clear what most Americans suspect: every citizen has a little larceny in his heart. Regarding Watergate,

one citizen is quoted as saying, "If we got rid of all the shady people in Washington, who'd be left to run the government?" Dishonesty is taken for granted, and there is a general feeling that very little can be done about it. A recent movie, *"The Thief Who Came to Dinner"*, is based on the same premise, namely, that you can't find an honest man today; just about everyone in the United States is crooked and corrupt, and those who aren't are ludicrous and out-of-it squares. In fact, the message of the film is clear: because we are all guilty, nobody is guilty; so there is nothing unethical by present day standards about being a thief. Need I point out that if the everybody-is-doing-it idea becomes the operational norm for most Americans, then we might as well close up shop and place a sign in the window. "Democracy Out of Business".

Why? Because the very existence of a democracy like ours calls for a relatively high level of virtue in its citizens. The civil law aims at enforcing only that degree of good conduct that is necessary for the peace, good order, and well being of society. It demands only the minimum. It does not define the full duty of any citizen in any situation. It prohibits socially intolerable conduct and prescribes the minimum that is obligatory in situations where affirmative action is legally required. But the law does not prescribe what society regards as optimum or even desirable conduct.

Indeed, the major difference between a democratic and an authoritarian society is that democracy leaves the maximum range of freedom for individual action. In an authoritarian society, on the other hand, the law undertakes to prescribe what the government regards as desirable conduct, thus imposing real obligations with respect to a much wider area and leaving a much smaller degree of choice to the individual.

SOCIAL RESPONSIBILITY

Robert M. Hutchins puts it well when he says, "In a democracy every person is, in a very real sense, a king, and it is the duty of kings to care about truth and justice and virtue". Indeed, this idea of social responsibility has meaning only in a democratic society; and, correspondingly, a democratic society is viable only when the ideal of social responsibility animates most of the citizens. It is fundamentally wrong for any citizen to take the position that he need not be concerned for the social consequences of his actions because

government will restrain him if his actions are improper or anti-social. Democracy simply won't work on this basis. Democratic processes require that citizens generally obey the law voluntarily and recognize an obligation of social responsibility most of the time regardless of the policeman on the corner.

Police action and government prosecution and enforcement must be reserved for the exceptional or doubtful case. If it were necessary for government to enforce all laws by enforcement action in all cases of their application, we would not only have a police state but also would have a complete breakdown of organized society within a short time. In short, the survival of democratic society depends upon the exercise of self-control, not upon coercion. Society will function and democracy will flourish if most citizens act in a socially responsible manner; not if none or few of them do.

But why does this sense of responsibility seem to be absent or so much diminished today? As I see it, the sense of obligation loses much of its force and urgency to the extent that relations with and obligations to individuals, are replaced by relations with and obligations to corporations and institutions.

OBLIGATIONS TO INDIVIDUALS VS. CORPORATIONS

Obligations to individuals make an impact on our emotions. Put a man in an intimate face to face relationship with another and he will feel guilty about hurting that other in his fortune or feelings. But where his obligations are to corporations, there is no such emotional impact. A man who would indignantly resent the suggestion that he might pinch something from his co-worker's pocket will think nothing of scrounging valuable tools or products from the plant where he works. Diddling the income tax or the customs has never been regarded as a wrong of the same order as diddling an individual customer or creditor. If you cheat your neighbor, you see him, or imagine him being upset, having to go without something he could otherwise have had; there is something here to stir your compassion. But if you manage to fly first class on a tourist ticket, cheat the Telephone Company, or lie about your economic situation in order to get a state scholarship, nobody suffers any loss, nobody is upset, and the total damage to any one person affected has to

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be reckoned in millionths of a penny. What is there to cause any compunction?

Further, ordinary ideas of moral responsibility do not easily fit into a situation in which life is dominated by corporate decisions. It seems reasonable to hold a man responsible only for what he knowingly and willingly does. The Baltimore Catechism defined a serious sin as a human act which embraced three elements: a grievous matter, sufficient reflection, and full consent of the will. But how is one to apply this definition to actions which are essentially corporate? So many of the things we do are things which nobody decides on and nobody could decide on by himself. The question "Who is responsible?" fails to get an answer. How far was the ordinary German citizen responsible for Belsen and Buchenwald? The American citizen for the atrocities of Vietnam? How far is a salesman responsible for the quality of his firm's goods? A professor in Johannesburg for educational apartheid, a research scientist for the government's application of his discoveries to prepare for atomic or bacteriological warfare? So much of our lives is dominated by decisions made by other people, so full is our world of actions which are nobody's in particular and for which nobody in particular is responsible, that there is a loss of contact between a man's personality and principles on the one hand, and his corporate activities, on the other; what he performs does is not the outcome of what he is and believes.

SENSELESS VANDALISM

This may account for the wave of senseless destruction against factories, schools, public parks, and buildings. Police tell us that much of the vandalism plaguing the community is caused by kids from middle class homes who feel no compunction for their behavior. The so-called "rip-off" — petty and not so petty theft from department stores, supermarkets, automobiles, and college bookstores — is not thought to be wrong. Rather it is a way of getting even with the "establishment" which dictates the conditions of living for the hapless multitude. With the widespread use of the computer, electronic fraud has increased. The young computer criminal rationalizes his conduct by claiming that stealing from large corporations is not really a crime.

You will recall that the perpetrators of Nazi atrocities in concentration camps were often people of averagely humane conduct in their private lives.

But this personal character was without affect on their impersonal official actions; these actions being directed by an authority which they could not effectively oppose, they came to feel that the evil they did was inevitable, that they were not personally responsible for it.

Thus, the whole philosophy of living based on the idea that happiness is a reward of effort — individual effort — comes to seem out of place in a society in which most effort is collective and what comes to a man depends mostly on the efforts of other people and the dispositions of the organization. Indeed, the sense of moral responsibility itself, the idea that a man is obliged to make the best that can be made of his life, and is somehow answerable for what he does with it, this sense, which is at the heart of all moral endeavor, can hardly fail to diminish in intensity.

NEUROSIS OF BEWILDERMENT

Thus, I pose more questions than I am able to answer. But I am convinced that a mixed-up kid, or a mixed-up adult, is often mixed up because he is not clear what the rules are and how seriously they are to be taken. The neurosis of bewilderment is common in our times. Small wonder that many young people are fearful of making a commitment or, having made one, keep worrying about it. The state of anomie, or normlessness, of doing your own thing, may be popular with the young, but it turns out, in the long run, to be less fun than advertised. When a compass has no "North", its owner may wander in circles. He has no point by which to chart his course. We are cheating our children when we do not give them clear-cut definitions of right and wrong. "In today's existential vacuum," says Viktor Frankl, "no instinct tells man what he has to do, and no tradition tells him what he ought to do: soon he will not know what he wants to do."

A person who has been well trained in a given system of morality, can later on modify his views, perhaps profoundly, and frame his own personal moral system. But if he has had no systematic moral guidance, if he has not first learned to imitate some model of right conduct, he will never acquire the critical judgment needed to work out his own set of principles; he just won't have the basic notions and the basic skills. This is why the effects of relaxation of standards show themselves, not in the first generation which learned moral insight from its stricter parents, but in the second

which did not. Given a clear and firm set of moral standards, a man can critically determine his own attitude toward them and introduce such modifications as his own practiced moral judgment suggests. But given no such clear set of standards, the task of constructing a code of conduct is altogether too much for him. A vague and general good will is no adequate substitute for definite moral principles.

INDEFINITENESS OF CONTEMPORARY STANDARDS

The literature of our time reflects this indefiniteness of contemporary standards. The characteristic complaint of many modern writers is that the world is "absurd", lacks "meaning", point, or purpose. The people who lodge this complaint are not short of food, clothing, entertainment, steady jobs, companions, mistresses, or any of the usual purchasable means of satisfaction; it is not that they want any specific article of goods or social status. Nor are they troubled by a sense of sin, nor are they afraid of falling short of some clearly-defined standards; they do not torment themselves with the fear of hell-fire.

Their difficulty is one of commitment, to use the existentialist term. They want a faith to live by, a cause to serve, a star to hitch their wagons to; without it, they suffer from a sense of not being at home in the world, of being all dressed up with nowhere to go. This sort of malaise is not likely to afflict people who are busy trying to scratch out a living or to get ahead. Nor does it afflict people who have a firm code of right and wrong. For if you have such a code and give it priority in your life (all the more if you believe it to have a divine source) then living up to this code will give a further justification to your activities — they are given meaning by being done in accordance with, and in the service of, your ideal — and this satisfaction is independent of any other success or gratification you may achieve.

LIFE AS A TASK

If you hold to the old-fashioned idea of life as a task, then you may congratulate yourself upon having performed it to the best of your ability. You may think that your life is what it was meant to be. And this conviction can be a profound source of consolation in sorrow and failure. But if you have abandoned it and yet lack the sunny disposition which would allow you to be carefree,

the loss of this sort of satisfaction is serious and can be devastating. Those are still worse off, who keep something of the feeling that life is a task, but have no definite notion what the task is, and so cannot tell whether they have succeeded in it — a state of mind portrayed by Kafka.

There is in man a spirit which will not let him be content with the life of the lotus eaters. There are people who can be satisfied with a life of eating, love making, lying in the sun, playing golf daily, or listening to Mozart; but there are also great numbers who cannot, and these include all the outstanding men, the leaders, seers, artists, as well as the wreckers. Many of us, perhaps most of us, demand that life should not merely be comfortable and convenient but also that it should be, in some more exalted fashion, justified — even that it should be justified rather than that it should be comfortable or convenient. Nothing in human history is more striking than the way in which, whenever life threatens to become easy or simple, men devise fresh ways of making it difficult, complicated, and hard. We want to be hacking our way up ice-covered mountains when we might be lounging on the beach. We want to be picking bloody quarrels over odd words in our sacred text when we might be joining hands in divine service. Even when we love and are loved, we peck and probe to assure ourselves that this love affair is not merely an agreeable human relationship, but a flawless fusion of minds in eternal devotion — which it cannot be.

Man is adapted to a life of ceaseless struggle against an unfriendly environment. When the environment becomes too bland, offers too little resistance, he is at a loss to get satisfaction out of life. Examine your own life: isn't it true that the moments you look back to with most pleasure, the vindicating moments of your life, include many in which your powers have been taxed to the utmost and you have been doing something with full attention and all of your ability — a difficult rock climb, the solution of a problem, the contemplation of divine truth, or the best hours of a love relationship.

SELF-RESPECT AN ESSENTIAL ELEMENT

If there is one essential element in a satisfying life, it is self-respect, and self-respect comes from having done one's best, having lived up to standards which one thoughtfully and seriously accepts.

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The Southern New England Cancer Group

Regional Interhospital Approach To The Management Of The Cancer Patient Has Demonstrated Its Usefulness

By Fred H. Vohr, M.D.

In 1970 the Cancer Study Group of the Rhode Island Advisory Committee of the Tri-State Regional Program accepted a report recommending the regional approach to the management of the patient with cancer. Subsequently, a contract was awarded to Doctor Louis Leone, Chief of Oncology at Rhode Island Hospital, for the purpose of initiating an inter-hospital cancer program that would establish a regional approach to the management of the cancer patient. The purpose of this article is to review the program after its initial year of operation. The original objectives of the program are listed:

1. To develop relationships among hospitals in Rhode Island and southeastern Massachusetts as a basis for the organization of a regional program for the management of patients with cancer.

2. To explore and suggest the organizational arrangements and utilization of resources both intra- and inter-hospital which will most effectively provide optimal care for patients with cancer. This specifically included the integration of the services of surgery, radio-therapy, and medical oncology in

the center hospital for optimal use by the community hospitals.

3. To determine the interest of community hospitals in Rhode Island and southeastern Massachusetts in participating in a regional program for the management of patients with all forms of neo-plastic disease.

4. To prepare a proposal for a more inclusive program for the management of cancer patients.

The objectives of the program were planned to be carried out through:

1. Conferences with physicians and administrators at participating hospitals centering around the intra-hospital mechanisms for managing cancer patients.

2. Regular conferences among hospitals involving appropriate specialists. Specifically, internists, oncologists, surgeons, radiotherapists, and related hospital personnel including nursing and rehabilitation components.

In addition, consultations by telephone and in person among member hospitals, coordinated through the project office, and for cooperative development of treatment protocols by physicians in participating hospitals.

The project began operation in April 1972, and the newly-formed group became the Southern New

FRED H. VOHR, M.D., of Providence, Rhode Island, Coordinator, Southern New England Cancer Group, Providence, Rhode Island.

England Cancer Group (S.N.E.C.G.). The staff consists of Fred Vohr, M.D., Associate Clinical Oncologist, Rhode Island Hospital, who was appointed coordinator of the program, and a full-time secretary based at a central office. It was anticipated this program would generate new ideas from participating hospitals and involve increasing numbers of interested physicians. In May 1972 the six original hospitals were approached through their administrators or through known oncologists or physicians interested in the treatment of cancer patients, and a nucleus was formed. This included Morton Hospital in Taunton, Massachusetts; Our Lady of Fatima unit of St. Joseph's Hospital in North Providence, Rhode Island; Rhode Island Hospital; Our Lady of Providence unit of St. Joseph's Hospital; South County Hospital in Wakefield, Rhode Island, and Truesdale Hospital in Fall River, Massachusetts. The first meeting was held May 2, 1972 and was attended by 10 representatives from five member hospitals. Meetings were held on a monthly basis over the next 12 months. It soon became apparent that a number of physicians whose primary hospitals did not desire formal commitment to the program wished to participate. The program gradually became more physician oriented and less hospital oriented. After one year the membership increased to 61 participating physicians of whom approximately 50 per cent were very active in the program. Currently several members of the staffs of the following hospitals are actively involved in the program: Cranston General Hospital; Kent County Hospital; Memorial Hospital in Pawtucket, Rhode Island; The Miriam Hospital in Providence, Rhode Island; Morton Hospital in Taunton, Massachusetts; Newport Hospital in Newport, Rhode Island; Notre Dame Hospital in Central Falls, Rhode Island; Providence Lying-In Hospital; Rhode Island Hospital; Rhode Island Medical Center General Hospital in Howard, Rhode Island; Roger Williams General Hospital in Providence; St. Joseph's Hospital (both units); South County Hospital; Truesdale Hospital; United States Naval Hospital in Newport, Rhode Island; Providence Veterans Administration Hospital at Davis Park, and Westerly Hospital.

Meetings are rotated among the participating hospitals and are distributed equally among in-city and regional hospitals outside of Providence. While greatest attendance is by members of the Southern New England Cancer Group, meetings are open to the entire medical community through

notification of staffs of participating hospitals and large numbers of other physicians in Rhode Island and southern Massachusetts. A typical meeting involves a presentation and discussion of the current mode of management of one aspect of cancer. In addition, printed material dealing with diagnosis or management of malignancy is disseminated regularly. Some subjects that have been dealt with in depth are:

1. Management of carcinomas of the gastrointestinal tract with 5 FU, Cytosan®, and radiotherapy; the usefulness of predictive tests in the diagnosis and management of cancer patients; the use of carcino embryonic antigen (CEA) test made available to the membership by Roger Williams General Hospital;
2. the chemotherapeutic management of ovarian carcinomas and specific details for a chemotherapy program;
3. the management of carcinoma of the breast with combined chemotherapy;
4. a review of the essential points of the Seventh National Cancer Conference held in Los Angeles in the fall of 1972;
5. leukemia cell culture studies offered to members by the Roger Williams General Hospital;
6. current management of Hodgkin's Disease;
7. the usefulness of radioisotope investigative techniques in evaluating the cancer patient;
8. the management of acute lymphocytic leukemia;
9. the management of oat cell carcinoma of the lung; and
10. combined surgical and chemotherapeutic management of malignant melanoma.

Guest speakers were invited, some of whom were considered to be exceptional authorities in their fields. The operations office has disseminated over 50 separate items of printed material pertinent to treating cancer patients. These appear to have been widely accepted. In March 1973 a questionnaire was sent to participating physicians regarding the impact of the Southern New England Cancer Group. The average number of cancer patients seen in a week by doctors answering the questionnaire was 18 with a range of from three to 50. Most felt the cancer group had a significant influence either directly or indirectly on their management of patients. Twenty physicians indicated that the Southern New England Cancer Group is useful in elucidating the regional resources available for managing cancer patients.

All answering physicians stated that the program should be continued and that the incorporation of a state-wide computerized cancer registry would be useful.

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Editorials

The "RIGHT" Plan or the WRONG Plan

In his recent campaign for election Governor Philip W. Noel promised the people of Rhode Island that he would provide for protection against the costs of dread disease.

At a meeting of the House of Delegates of the Rhode Island Medical Society on October 3 a report was approved addressed to that promise. (See page 519 of this issue of the Journal.)

A group organized to implement that promise was designated as The Governor's Task Force for Health Finance. As the Task Force got underway one began to sense that it might well be headed in a different direction.

This feeling was reinforced when there appeared in "The National Health Insurance Report," volume 3, number 21, October 22, 1973, the following: "*Washington Focus*: Meanwhile in at least three states a feeling grows that they can't wait for Federal Legislation. They are considering mini-National Health Insurance programs of their own in order to gain effective regulatory control over health costs.

"UNABLE TO WAIT FOR FEDERAL LEGISLATION, MORE STATES DRAFT HEALTH INSURANCE PLANS.

"Several states are considering legislating their own health insurance programs without waiting for a national health insurance bill to be passed.

"Almost uniformly, their reasons hinge on the fact that many states now spend more on health care — with greater gaps in the number of residents covered — than a comprehensive, state-wide health plan would cost.

"For example, Governor Philip W. Noel (D) of Rhode Island said Rhode Islanders pay almost \$420 million a year for Health Care while many residents are not even getting basic health services.

"That sum, he said, 'is enough to give each and every Rhode Islander comprehensive medical coverage.' Currently the state spends about \$60 million for health services, nearly 16% of its total budget.

"Noel said he plans to propose a comprehensive health insurance bill into the General Assembly in January. Last year, he urged a dread disease insurance program providing protection against cost of long-term illnesses which would have covered all

residents with Blue Cross, Medicare or other health insurance."

If this report is accurate it goes well beyond the Governor's announced purpose.

The legislation under consideration as of this writing may well compromise job opportunities within the state, and could affect or abolish jobs held by Rhode Islanders in neighboring states. It could jolt the insurance industry and intrude upon the functions of the Workmens Compensation Commission. It could cause harm to the Blue Plans of Rhode Island, among the finest, if not the finest, in the entire nation. The loose construction of the bill could well create confusion in the medical care delivery system of Rhode Island.

Paradoxically, this could be a most retrogressive piece of legislation if it were enacted into law. Imagine, if you will, fifty independent, uncoordinated, unrelated state controlled systems of medicine in one country. This is what is implied in the concept of state control. Washington is well aware of its mandate and destiny in the health care field. In Rhode Island we may face several years of turmoil and the prospect of having the results of that turmoil washed away by the precedence of federal over state legislation.

It is important for members of the Rhode Island medical profession to become aware of the so-called "RIGHT PLAN" (The Rhode Island Guaranteed Health Treatment Plan). The State and district medical societies will furnish information to their members upon request. They are conversant with the proceedings of the Task Force.

The Rhode Island medical profession should evaluate the proposed legislation and be prepared to react constructively when its contents become public. There may be little time between publication and the opportunity to make their feelings known to the Governor and to their legislative leaders, state representatives, and senators.

We are sympathetic with the Governor's goal of lightening the financial burden of the seriously ill of Rhode Island and trust that ultimately his cause will be embodied in sound legislation. The Rhode Island Medical community stands ready to assist him in attaining this objective.

CONFIDENTIALITY

The confidential relationship of patient and doctor has had a long and honorable tradition now undergoing more severe erosion than at any past time. Confidentiality had great utility for both parties when it existed. The cornerstone afforded by the individual medical history has been the beginning of all art and science in medicine. Clues to all further medical evaluation began with the patient's history and the confidential character implied in its discovery. But the medicine of today with its scientific accoutrements has changed things. To make medical science widely available and affordable, government money and third party insurance have been inserted into medicine. It is this incursion that has split the old one-to-one responsibility of doctor and patient.

To insure accountability for their dollar spent, third parties now have legal access to increasing details of patients' histories and illnesses. This information developed by medical histories that support diagnosis and treatment is increasingly

public property, removed from any medical supervision or control and subject to the vagaries of the information pipeline. What leaks exist in this new plumbing is a matter for conjecture. But the principle of accountability seems about to replace medical confidentiality.

Third parties to the physician-patient contract insist that diagnosis and treatment be documented, reviewed, and controlled. Consider the plight of a patient with hypertension, bleeding ulcer, and business reverses who has failed to file income tax returns for five years now exposed to third parties, while the doctor tries to determine cause and effect in that unhappy situation. When patients discover this involuntary trade-off of accountability for confidentiality, their medical histories necessarily will become reticent. Doctors have already learned to write their records for an unknown audience. The world of Orwellian 1984 seems fast upon us, fostered by accountability and cost accounting.

THE RHODE ISLAND UNIFORM CONTROLLED SUBSTANCES ACT (73-H 6369, as amended)*

The Drug Abuse Committee of the Rhode Island Medical Society is much concerned about a major piece of legislation which will be considered by the Senate Judiciary Committee at the January, 1974 Session of the Rhode Island General Assembly. 73-H 6369 (as amended) represents a necessary effort to translate the Comprehensive Drug Abuse Prevention and Control Act of 1970, a federal statute, into a congruent state law.

The National Conference of Commissioners on Uniform State Laws traditionally suggests to states through their Uniform Codes how each individual state can accomplish this revision. Thirty-nine states have already adopted these recommendations with few alterations. The Bureau of Narcotics and Dangerous Drugs has promoted this Uniform Code as a model act.

In January of 1973, the Society's Drug Abuse Committee suggested to the Rhode Island Department of Mental Health, Retardation, and Hospitals legislative recommendations in detail for its consideration. This activity was launched because the Committee was and is concerned about the legal fate of abuses and the rights of patients

and physicians along with general societal attention to the problems of drug abuse.

It was obvious that this type of legislation affected very deeply many segments of the community and deserved close consideration if equitable and efficient laws were to be enacted. In essence, the Drug Abuse Committee of the Society recommended the adoption of the Uniform Code.

Unfortunately these original suggestions were altered drastically by a subsequent Task Force consisting mainly of enforcement authorities and pharmacists, without any consultation from the Committee. 73-H 6369 (as amended) as a result, we believe, is a poor piece of legislation which either needs complete rewriting or major amendment.

The Drug Abuse Committee views the serious abuser as sick and needing concern and help rather than punishment. We view the trafficker, on the other hand, as an exploiter who should be punished severely. We further feel that justice demands clear separation in the penalty structure for these differing types of individuals. The committee along with the American Medical Association and the American Bar Association and the National Commission on Marijuana agree that penalties for marijuana pos-

(Continued on next page)

*See Drug Abuse Report on Page 526.

session should be moderate and fair. We do not suggest legalization but eventual decriminalization.

73-H 6369 (as amended) is proposed to revamp statutes which at present are the second harshest in the country. A section from the Uniform Code in 73-H 6369 (as amended) would make first-offense simple possession a discretionary probationary offense, but the remainder of the bill, with all its twists and turns, does nothing to bring the penalty structure in line with present state legislative trends throughout the nation.

The Drug Abuse Committee is further concerned about a section of 73-H 6369 (as amended) which would seriously interfere with the rights of patients and interfere with the physician-patient relationship.

Rhode Island state law, unlike that of our neighboring states, requires reporting by a pharmacist of the names of patients receiving narcotics for any reasons, along with the names of the physicians prescribing them. The physician also must explain his reasons for prescribing them for a period exceeding three months. The Uniform Code has never suggested that requirement. 73-H 6369 (as amended) proposes drastically to increase the number of patients who must be reported by requiring that all patients receiving any Schedule II drug be included. Schedule II includes amphetamines, methyl-

phenidate, methaqualone, and several short-acting barbiturates. The bureaucratic rationale is that it will aid in preventing forged prescriptions and also will prevent misuse of prescribing practices.

No federal authority has ever endorsed this control method. It exists in only four states and in one of them it is under consideration as a constitutional challenge because of its invasion of patients' right to confidentiality.

It cannot be considered seriously as preventing forgeries since it is a monthly reporting system. Apparently federal authorities do not feel that it is a meaningful method of physician surveillance either, and the former Director of the Bureau of Narcotics and Dangerous Drugs feels that it only results in a glut of paper work.

73-H 6369 (as amended) would also require an explanation of continued prescribing of these drugs after three months.

We feel, as does the American Civil Liberties Union and the Association for Children with Learning Disorders, R. I. Chapter, that this proposal is a serious invasion of patients' rights.

In short, we strongly recommend that Rhode Island follow the lead of thirty-nine other states and adopt the language of the Uniform Code in translating the federal law of 1970 into state law.



HOUSE OF DELEGATES REPORT

(Continued from page 486)

in the development of effective methods for evaluating drugs used primarily to alleviate subjective symptoms, or drugs for which controlled clinical studies seem inappropriate; and, (4) In continuing to work closely with the FDA, make efforts to develop an effective system of communicating the views of practicing physicians and medical specialty societies when action is proposed that may result in removal of frequently prescribed drugs from the market.

In other actions affecting the relationship of physicians with government (and third parties), the House:

- Encouraged continued efforts to develop a uniform claim form for insurance claims.
- Supported the on-going efforts to educate physicians, private insurance plans and government agencies as to the advantages of adopting the third edition of Current Pro-

cedural Terminology to identify and report services provided by physicians.

- And directed the Council on Medical Service to study the problems presented by "prospective admission" of hospital patients under Medicare and Medicaid, "retrospective denial" of benefits and report its findings and recommendations at the 1973 Clinical Meeting at Anaheim, California.

Certificate of Need Law: Report C of the Council on Medical Service and Resolution 73 (Florida) deal with mandatory Certificate of Need Laws at the state level which regulate planning for health facilities and personnel. The House adopted a substitute resolution which calls for, (1) Continued AMA support for voluntary planning that preserves decision-making at the local level; (2) That state certificate of need laws, if enacted, rest final authority within a board which

(Continued on page 517)

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Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

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Medical history, physical examination
Past pill experience

Known special hormonal needs

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Note: Oral contraceptives are complex medications. As with all medications they should be prescribed with discriminating care, and only after reference to full prescribing information. For brief summary of prescribing information, please see next page.

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Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain^{1,2} leading to this conclusion, and one³ in the United States. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as non-users. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of

fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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Indication—Enovid-E is indicated for oral contraception.

The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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HOUSE OF DELEGATES REPORT

(Continued from page 516)

includes representation by physicians in the active practice of medicine; and (3) That these recommendations be forwarded to the Secretary of Health, Education, and Welfare with the request that they be included in regulations for implementation of the Comprehensive Health Planning Act.

Unions: The House adopted Resolution 86 (New York) which reaffirms the tradition of the medical profession of not withholding medical services (withholding services is a practice of most unions), or performing any act interfering with public welfare. The House also approved Report F of the Board of Trustees which opposes unionism among self-employed physicians. The report also recognizes that physicians in employment situations need assistance and support, and encourages the Board of Trustees to maintain its interest and concern for these physicians. The report also affirms the no-withholding of services principles.

Malpractice: The House took several actions in regard to medical malpractice, including approval of Report GG of the Board of Trustees which outlines the proposed formation of a Medical Liability Commission to represent health care providers in dealing with medical malpractice problems. The proposed commission was outlined

on June 20 by a planning committee consisting of representatives of the AMA, AHA, American College of Surgeons, American College of Physicians and four specialty societies. An organizing meeting for the proposed commission will be held in Chicago in September. The House also adopted a resolution commending Dr. Charles A. Hoffman, AMA President, for his service on NEW Commission on Medical Malpractice, and recommending wide dissemination of Doctor Hoffman's dissenting report.

WILLIAM J. MACDONALD, M.D.
Delegate

JOHN J. CUNNINGHAM, M.D.
Alternate Delegate

DELIVERY OF MEDICAL CARE COMMITTEE

The history of the Committee on the Delivery of Medical Care of The Rhode Island Medical Society goes back about two years when it became apparent that the Society should no longer, and could no longer, accept the status quo for medical care delivery systems in Rhode Island, and that it could and should begin to think of the future in terms of the realities which surround us.

This thinking was ably summed up by Dr. Robert V. Lewis, when, in his Rhode Island Medi-

(Continued on next page)



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MEDICAL BUREAU
of the
Providence Medical Association

cal Society Presidential Address, he said, speaking about identity, "Identity whether of an individual or of an institution, is the satisfactory integration into an environment *over which one does not have the ultimate control*, but in which one may make an accommodation by selectively choosing alternatives on the basis of one's experience and attitudes."

Quoting from my Providence Medical Association Presidential Address I said, "We may never see a National Health Insurance Program as it had developed in other countries, but we may well, and probably will, see the Federal Government buying most *if not all* medical care dispensed in this country . . . Legislative and administrative attitudes have already begun to favor systems of delivery offering Health Maintenance Organization and Pre-paid concepts. I doubt the government will ever ban any type of medical care delivery, but it will have no qualms about making some systems *irresistably* more attractive to consumers than others, and it has the clout to do this . . . External changes take place whether we want them or not: internal changes take place only if we want them.

The Federal Government in my opinion is determined to shift to the purchase of medical care

within the concept of HMO and Pre-paid Plans, in the words of one of our Senators, "No matter what the cost".

Your committee began as a function of the Providence Medical Association, and Dr. Robert V. Lewis, seeing merit in its goals, expanded the scope of the committee to State wide proportions by additional members from all the County Medical Societies, after making it a Committee of the Rhode Island Medical Society.

Its members met several times and decided the first order of business was to formulate alternatives to our present delivery system, and to submit these to the Society at large in the form of a questionnaire to test their acceptance.

Before this could be accomplished along came SEARCH and Dr. H. Denham Scott, with money to fund such an endeavor. Thus, we put the cart before the horse, and the committee, with hard working Doctor Lewis as an ever present member ex officio, with Doctor Scott's help, produced the questionnaire which all of you received.

We again quote Doctor Lewis, who on the basis of the answers said "He (The Rhode Island Medical Society Member) indicates a willingness to participate in total prepayment plans sponsored by Blue Cross and Blue Shield as the agencies of his choice . . . He is willing to enter into a capitation group in which there is reasonable equity of distribution and professional control."

Recently, a questionnaire was sent to representative members of the Business Community of the State of Rhode Island by staff of the Blue plans and quoting from their observation after studying the response:

"The Plans posture on who should be responsible for controlling health care costs appears consistent with the businessmen's views, in that the plans, hospitals, doctors, and the government have a joint responsibility. There appears to be a market for more comprehensive coverage."

With this background, we present the first very rough draft of a tentative plan worked out by your committee with the help of representatives from the Blue Cross-Blue Shield staff.

What we ask for tonight is no more than a vote of permission to proceed with further work on the plan for your consideration.

We earnestly and sincerely solicit comments, suggestions, and objections from all the members of the Rhode Island Medical Society, in prose form, as a supplement to the yes, no, and check

INTER NOS . . .

Just between us,

Local group plans have demonstrated a record of strength and stability that is rarely matched by programs more geographically spread.

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mark answers contained in the returned questionnaires.

Respectfully submitted:

JOSEPH E. CARUOLO, M.D.

Chairman

**POSITION STATEMENT TO BE SUBMITTED TO
THE GOVERNOR'S HEALTH TASK FORCE FROM
THE COMMITTEE ON THE DELIVERY OF MEDICAL
CARE OF THE RHODE ISLAND MEDICAL
SOCIETY**

The Committee on the Delivery of Medical Care of the Rhode Island Medical Society supports the Governor's Task Force in principle because its mission is to improve the Health Care Delivery system.

As we view the current activity of the Task Force it is in the stage of developing alternative goals. We should like to contribute the following:

The list of goals should be open-ended, for there will always be new problems arising in the health care delivery system. Goals should be listed in order of priority and the Task Force should limit itself only to those problems which it can reasonably expect to solve.

We should first like to present our concept of what is now going on in Rhode Island and later, to present what we feel ought first to be accomplished by the Task Force.

December of 1972 found 85 per cent of Rhode Islanders covered by Blue Cross and Blue Shield. Virtually all of that number had full coverage for hospitalization in a semi-private room. More than 60 per cent were covered by Major Medical Insurance for catastrophic and chronic illness, and accidental injury.

December of 1972 found 85,000 Rhode Islanders eligible for the Rhode Island Medical Assistance Program.

December of 1972 found thousands of Rhode Islanders providing for their health insurance needs through other private corporations.

December of 1972 found 6,000 Rhode Islanders qualified for the State Vocational Rehabilitation Program, and a significant number of these eligible for Rhode Island Medical Assistance.

December of 1972 found it possible in most, if not all, instances, for persons in need of medical care, routine or catastrophic, who do not have medical insurance of any kind, and who do not have personal resources, to obtain full medical coverage *retroactively*.

December of 1972 found lively experimentation in the health care delivery system in several quar-

ters including the Committee on the Delivery of Health Care of the Rhode Island Medical Society working in cooperation with the Blue plans.

December of 1972 found a medical school established at Brown University and on its way to a leading position among American medical schools.

In no way then, do we subscribe to a "concept of chaos" in the health care delivery system, developed in recent years and found so often in print.

We do have a system and it works very well!

We feel that an attempt to restructure our system would be to flirt with a maiden of medical and administrative disaster.

In no way, on the other hand, would we support a concept which would propose that the system is perfect, requiring no changes.

We feel that the first efforts of the Task Force should be directed toward the development of a minimal health care package with special attention toward that component of such a package which might be described as "protection against the catastrophic effects of illness".

We feel it would be illogical to develop a minimal health care package without a catastrophic provision, and just as illogical to develop protection against the catastrophic effects of illness without a minimum health care package.

With regard to the minimum package, we would caution the Task Force to stay within the bounds of medical care items. It should avoid assuming total responsibility for the person who has entered the health care system, but should work in conjunction with already established social welfare agencies to provide for non-medical needs. Only in this way can the public know what is being spent on medical care.

With regard to the "catastrophic provision" of the minimal health care package, we would like to see emphasis placed on all the catastrophic

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effects of illness: physical, psychological, social, and financial. The Task Force should avoid the semantics of trying to define a catastrophic illness in terms of its medical identity. Again, the Task Force should concentrate on providing only for the medical needs of a catastrophe arising out of illness, and should cooperate with already established social welfare agencies to provide for other catastrophic effects of not only major but also minor illness.

It is our opinion that the Governor's Task Force on Health should give "second" or "high" priority to a study of ways in which workers temporarily unemployed may have continuance of their insurance coverage.

SUMMARY

The Committee on the Delivery of Medical Care of the Rhode Island Medical Society pledges support of and cooperation with the Governor's Task Force on Health Insurance.

The Committee urges the Task Force to place its energies and resources behind limited and probably attainable goals.

Respectfully submitted:

JOSEPH E. CARUOLO, M.D.
Chairman

COMMITTEE ON THE DELIVERY OF MEDICAL CARE

Introduction

During the past year, the Committee has analyzed those factors surrounding the issue of the future of the Delivery of Medical Care in Rhode Island. The goal has been to develop the basic concepts of experimental alternative delivery system that would both incorporate many of the principles discussed in conjunction with Health Services Organizations yet retain the opportunity for active participation by *all* Rhode Island physicians and minimize the disruptive aspects usually

associated with closed panel prepaid group practice. While many details remain to be worked out, general principles of the approach and the broad outlines of the program are available for discussion. The experience of other prepaid open panel plans developed in other areas of the country has been drawn on to develop the following material.

I. A REVIEW OF THE PROBLEMS

The nation's health care delivery and financing system is accused of many deficiencies by its critics. No single plan could attempt to answer them all. Specific identification of the problem situations to which the proposed Health Services Plan is addressed may prove helpful in its evaluation.

No Benefits for Primary Care

Benefits for primary care, such as office calls, are not ordinarily included in even the most comprehensive employee group policies. It is claimed that this lack of coverage may discourage some from seeking early care for serious progressive illness. In any event, the absence of such coverage leaves a sizeable amount of care to be patient financed. Employers and insurers are usually reluctant to include these benefits because of concern over the possibility of over-utilization and because of their awareness that traditional insurance claim machinery is inefficient in the processing of small claims. The cost of billing and paying for a low cost service often exceeds the net cost of the services.

Hospital Utilization

Both national and local statistics show that an overwhelming percentage of the health care dollar is paid for hospital care. In 1970, the average cost in the United States for each patient day in a community hospital was more than \$80! Any decrease in hospital use will generate significant savings which can be used to finance alternative methods of delivery. Data from closed panel plans and hospital admission control programs suggest that substantial reductions in hospital use are possible without adversely affecting the quality of health care. To the extent that a high quality of care can be delivered efficiently in a less expensive setting, health care is more costly than it need be.

No System to Document Office Care

Large clinics and hospitals have systems which guide and check the level and type of care a patient receives. Closed panel plans cite these systems as one of their strongest advantages. In the

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provision of primary care there is a contrast between the closed panel plan and the small office practice. A documented, formal system for consultation, referral and peer review in the small office setting is ordinarily unavailable. While the patients may be receiving excellent care, the physician is not equipped to demonstrate this to the administrators, public and private, who approve the purchase of an ever-increasing proportion of the nation's medical care. As a result, small office practice is made to appear comparatively less desirable. In the opinion of the Chairman this point is very cogent and important and is precisely the reason why we have to get into the field of medical care in the manner purchasers want to buy it.

II. SOME ALTERNATIVES

Closed panel plans such as the Kaiser Plan, the Puget Sound Co-op, and the Rhode Island Group Health Association offer ready answers to the problems just reviewed. *For this reason, these plans are very appealing to the administrators who make buying decisions about health care.* There seems hope in some quarters, that, if these plans are talked about enough, the health care delivery system will remake itself in their image. But there are some practical problems that the planners don't like to talk about.

One is money. These central facilities are expensive to build, equip, and staff. They usually operate at a loss on an indefinite period. Most communities and many other sources of monies are not so dissatisfied with their health care as to be ready to contribute the necessary start-up funds, estimated to be several million dollars per facility. The Federal Government seems long on encouragement and short on grant money at this time. It is presently funding modest planning grants only.

Another is acceptance. Many patients feel that health care is a personal matter, and prefer access to the delivery system through someone they consider to be their personal physician. Many physicians feel similarly, and would prefer not to practice in an institutional type of setting. Even in those areas where closed panel plans are well established, it is unusual for them to serve either a majority of the community or even a majority of an employee group. The comparatively slow geographic spread of the closed panel plans suggests the lack of universal appeal to patients and physicians.

An alternative solution is a physician-based

Health Services Plan. The most important feature of this plan is that the problems which were identified earlier, are dealt with *within the present health care delivery system.*

The Health Services Plan provides benefits for primary care. Upon joining the Plan, the patient identifies a participating physician as his source for primary care. Through arrangements made between this source and the Plan, primary care for the member is paid for on an efficient basis. Payment is largely "in advance" with an absolute minimum of paper work. These benefits encourage the provision of care in the setting which is best for the patient, and most economical for the Plan.

The Health Services Plan encourages efficient use of hospital facilities. The Plan may be devised so that any savings which result from more efficient care may be divided between the patient and the physician. The availability of benefits without restriction on where the services are provided, is expected to complement the financial incentive to utilize less costly settings where appropriate, creating a climate in which the efficient delivery of quality care is encouraged by the Plan.

The Health Services Plan includes a system which will provide a demonstrable data base for quality review. In addition, the referral system is formalized and given visibility. In combination, these features form a documented, formal system for the physician peer group to monitor primary care delivered in the small office setting.

III. HEALTH SERVICES PLAN PRINCIPLES

In structuring a plan to meet this challenge, that is, to deal with the problems of benefits for primary care, efficient use of hospitals, control of costs, and retention of quality within the present delivery system, the following guiding principles should be adopted:

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This program is acceptable for 12 prescribed hours by the American Academy of General Practice and registration fee will be \$75.00. Further information will be furnished by Lillian H. Lockhart, M.D., Chairman, Pediatric Postgraduate Committee, The University of Texas Medical Branch, Galveston, Texas 77550.

- A. That physicians have the right to choose to practice alone, in small groups, or in large groups, as they believe best suits their professional preference and the needs of their patients.
- B. That the referral system which provides mutual support among physicians while improving the quality of patient care deserves formal recognition and support.
- C. That the present free choice of physician and physician-patient relationship will be maintained.
- D. That based on the convenient location of the physician, the public can determine on an individual basis whether or not it wishes to participate in the experiment. The experiment must incorporate the concept of dual choice. All elements of program design and marketing activities must be developed to give each potential subscriber complete and accurate information on which he may make an informed choice. This means that each potential subscriber must know what services will be available, where they will be available and by whom they will be performed. The present restrictions against public education on the specific physicians participating in the program must be updated to recognize the new developments of alternative delivery systems and the new demands of the marketplace. Any experiment sponsored by Blue Cross and Blue Shield with the Medical Society must depend on voluntary participation on the part of the subscriber. Any experiment or move in this direction needs full approval of the Rhode Island Medical Society. As is true of any non-mandated program, each aspect of the experiment must be evaluated in light of its potential for subscriber satisfaction

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if the program is to attain any acceptable level of marketing success and sustained enrollment.

- E. That comprehensive outpatient benefits will encourage the use of less costly settings as an alternative to inpatient hospital confinement, and that this will produce savings for the program.
- F. That a more efficient financing method for basic services will vastly reduce recording, reporting and payment costs, saving office expense for both the physician and Blue Shield. To promote the most economical results, it is imperative that all providers of service be personally involved in the financial aspects of the program. Such involvement is intended to promote the most judicious use of health care services and to promote physician interest and concern in the proper use of facilities and time. prove the quality of care provided under
- G. That formalized review procedures will im-
the program, and may also reduce costs through careful attention to service and settings. Any experiment involving the financial elements of health services must present an open forum for the evaluation of quality in all aspects of health care. Unless community standards of quality are maintained or surpassed, economic accomplishments are meaningless.
- H. That any savings resulting from the program may be shared between the subscriber and physicians affiliated with the program.
- I. That the Health Services Plan will enable the State Medical Society and Blue Cross and Blue Shield to mutually obtain knowledge and experience with this type of health care delivery system and prepayment mechanism consistent with the best interests of the public and medicine. Once a program is established, there will be a need to offer it to Medicare recipients, welfare recipients, Federal employees and any other people covered by Federal Health Programs. To reduce the amount of program modification necessary for Federal acceptance, certain essential elements such as centralized record systems and required statistical reporting should be included in the original program design.

IV. PROGRAM DESIGN

How the Plan Might Work—Patient and Physician

The program provides comprehensive out-of-hospital benefits including general office care, well-baby care, and benefits for out-of-hospital consultation services which will encourage the providing of care in outpatient settings. The concept continues, however, to honor the physician's right to treat, prescribe or recommend any services that in his judgment are required for quality medical care.

Some, especially General Practitioners, Internists, Pediatricians, and Obstetricians and Gynecologists, will want to participate as "Primary Physicians" — that is, to provide primary health care and accept responsibility for guiding their patients through the health care delivery system. Others, especially those specialists who care largely for referred patients, will probably prefer to participate as "Affiliated Physicians": without responsibility for the primary health care of specific patients.

In preparation for the enrollment of the members who will receive care under a Health Services Plan, a benefit brochure is prepared. In addition to the benefits, this brochure includes "ground rules" for patients and a listing of the physicians who are participating.

How the Plan Might Work — Payment for Care

One major reason primary care has not been included in the traditional health insurance policies is that an individual claims system is so inefficient. Simply, problem with financing primary care is that the unit cost of recording, processing and collecting on an individual claim basis is estimated to be at least half of the total cost of the benefit, leaving something less than half for the professional service. The challenge, then, seems to be one of how to pay the physician for professional service without incurring wasteful paperwork expense.

One possible answer is the prepayment of a "capitation" to the Primary Physician. Under this approach, advance payment could be accomplished, based on the number of members who had chosen this Primary Physician, and the services he or she had agreed to provide. The "Health Services Fee" for all members could be paid each month to the Primary Physician, and forwarded together with the monthly listing of members eligible for care.

Primary Physicians will be paid on the basis

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of an advance "Health Services Fee" for high frequency, low cost services in the interest of reducing paperwork (by 50 per cent or more), and Fee-for-Service for low frequency, high cost services. The actual payment for individuals will be determined and mutually agreed upon as a result of on-site visits to identify the level of services customarily provided. This will be related to statistical analysis of presently insured Blue Shield benefits and actuarial consultation for presently un-insured services to determine total payment of Health Services Program services. Subscribers enrolled in the Health Services Program will select their participating Primary Physician of medical care. Primary care may include the evaluation and management of early complaints, symptoms, problems and the chronic intractable aspects of disease. Except for emergencies, care not authorized by a physician participating in the Health Services Plan, either as a Primary Physician or as an Affiliate, opts the member out of Plan benefits.

Care provided by Affiliated Physicians (i.e., Specialists) on the basis of referral would be reimbursed on the basis of UCR charges agreed to during the Plan year. Hospital care would be paid for through the routine Blue Cross mechanism although special accounting procedures would be instituted to highlight inpatient savings resulting from the Plan.

Care, which is truly of an emergency nature, roughly described as "when it would be impractical to enter the delivery system through the Primary Physician, because of distance, unavailability, or the nature of the illness or accident", will be covered under the insured benefits, and *would not* opt the patient out of the Plan.

The key to the financing of the Plan is an instrument known as the "Health Services Account". This device allows the Primary Physician to have control over the majority of the resources available for patient care.

A Health Services Account will be established for *all* members enrolling for coverage. The HSA will include the total premium paid less Blue Cross and Blue Shield administrative fee, the premium for out-of-area claims and contingency reserve requirements.

Payment for professional services including the advance Health Services Fee, Fee-for-Service payments to other providers of services or supplies, and Blue Cross premiums will be charged against the HSA on a monthly basis. All charges made

against the HSA will be for services and supplies, including hospitalization, recommended or prescribed by physicians affiliated with the Plan.

A HSA pool will be established for primary physicians and medical groups designated by a small number of members as their primary providers of medical care. A separate TSA will be established for each Primary Physician and medical group with a sufficient number of members for statistical credibility. Large medical groups and other Primary Physicians with their own separate HSA will determine the division of their own excess funds. The formula for the division of physician excess funds in the pooled HSA's will be developed and explained to those physicians involved.

It should be noted that the HSA would include resources covering virtually all aspects of care, including hospitalization. Thus, for the first time, a mechanism will be created which allows the physicians to share in the benefits resulting from the efficient use of these resources. Physicians affiliated with the Plan and insured groups might share in any annual excess accumulated in the individual HSA's, with the physicians incentive payment calculated and paid annually. This point was the subject of much discussion in committee for the following reasons:

1. The concept may lead to underutilization.
2. The Director of Business Regulation and the Insurance Commissioner are bound to confiscate such overages as rightfully belonging to the public.

How the Plan Might Work — Professional Review

An effective review program is an essential component of the Health Services Plan. To implement such a program the needed data must be identified, collected, and analyzed or summarized. In addition, one or more organized and motivated groups of professionals must be involved in the review process.

A model data collection program has been developed by Blue Cross and Blue Shield. The needed data will be recorded from the Primary Physician documentation and the claim forms submitted on referral and hospitalized cases. This data will be classified and summarized, allowing patterns of practice to be identified. These, on comparative rank and profile form, will allow each physician providing care to compare his statistics with other individuals and with group averages. This will certainly stimulate thought and discussion, perhaps leading to more uniform and theoretically

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improved care by physicians in primary practice

If the medical community is sufficiently close knit, one professional review grouping is ideal. More than one grouping can be utilized if needed. These groups would exercise the leadership responsibilities involved in the review and improvement of the performance of Primary Physicians.

"Utilization Review" is another key to efficient and economical care. This provides a mechanism for the establishment of "standards" and the comparison of services provided against those "standards". As the "standards" represent a level beyond which over-utilization is a reasonable possibility, services which do not comply with "standards" are investigated.

The precise methods required for effective review will be developed by the Medical Society, perhaps in conjunction with the PSRO effort. Similarly conceived Blue Shield Programs in other areas of the country have done substantial work in this area and could serve as potential models.

Possible Organization

Precise details regarding optimal organizational structure are still under discussion. One alternative is sponsorship by Blue Shield of Rhode Island and another is a separately incorporated and identifiable foundation. In any case, a physician oriented governing body will be established to provide overall guidance to the program.

Out of this process would emerge a Central State Committee which would serve as the organizing agency for the providers of service. The Committee would be responsible for canvassing all physicians in the State to solicit participation and together with Blue Cross and Blue Shield would work with the interested physicians in each area of the State to develop the capabilities necessary for such a Plan. In addition, the State Committee would be directly responsible for the administration and coordination of peer review and quality review activities.

Since access and availability are of prime concern to the subscribers' acceptance of a program such as this, it would be impractical to form one basic medical Plan to serve the entire State. Accordingly, it is suggested that individual HSOWW's (Health Service Organizations Without Walls) be organized independently in each medical service area of the State. The Medical service areas of the State have typically been defined as: Providence, Pawtucket, Woonsocket; Newport, Bristol; Kent and Westerly, although

this could be easily modified to meet the need of individual communities.

Following approval of the Health Services Plan concept by the appropriate area Medical Society, the first step in implementation is individual physician contract. Each physician is called upon and invited to join the Plan. The Plan concept would be reviewed, and the type and scope of that physician's practice related to the Health Services Plan, to help establish whether and how each physician will participate in the Plan. Each physician would make his own decision regarding the portion of his practice to be financed by prepayment. The physician may elect to participate either as a Primary Physician, an Affiliated Specialist *or both*. A statewide array of participating specialists would be formed to be available for referrals from all Primary Physicians in order to minimize interference with traditional referral patterns.

Technical and operational support for selected aspects of the program would be delegated to Blue Cross and Blue Shield of Rhode Island. This would include:

- A. Development of the technical details, such as budgeting and actuarial support, necessary to meet the need for an acceptable alternative financing and delivery system and expertise in the installation of this system.
- B. Marketing experience in the enrollment of patient members to assure meaningful numbers with probable need for care consistent with the cost assumptions made.
- C. Administrative expertise in developing and maintenance of membership roles and financial records, and in claims processing.
- D. Statistical and data processing capacity to efficiently collect the needed data, organize and analyze this data and provide the basis from which the professional review process begins.
- E. Skilled program management including communications with non-cooperative members, periodic reenrollment, recalculations of the various price and cost factors and other supporting functions.
- F. Insurance support in terms of out-of-area services and alternate or conversion types of insured Plans.

V. CONCLUSION

The program being proposed is specifically structured
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tured to allow physicians to participate in a comprehensive benefit program financed by a capitation arrangement on the "*group practice without walls*" approach.

The intent is to financially involve participants in the health services being rendered in order to promote more judicious use of the alternative means of delivery care. It seems reasonable that a Health Services Plan may develop savings, in addition to the provision of more comprehensive benefits. Savings appear especially possible primarily through reducing inpatient hospitalization. If savings occur as expected, a system for their measurement and distribution will be part of the Plan.

The physicians may participate in these savings on a basis which recognizes their varying degrees of contribution to these savings. The remainder should be available to patient participants in the program through expanded benefits of stabilized premiums.

A co-payment feature is an important aspect to prevent overutilization and it can be met perhaps through State Welfare Department financing.

Detailed planning to flesh out the concepts outlined above will be the highest priority of the Committee during the upcoming six months. It is the goal of the Committee to, in conjunction with Blue Cross and Blue Shield, develop a full operational Plan in this period. Given the progress made to date and the work that is proceeding in other areas of the country, this is a realistic and attainable goal.

Respectfully submitted:

JOSEPH E. CARUOLO, M.D.
Chairman

DRUG ABUSE COMMITTEE

The Drug Abuse Committee has always looked upon this phenomenon from a medical perspective, viewing the abuser as a person with problems needing help. Because of this we have sought to influence legislation in this area so to be fair and just to the abuser while at the same time protecting the community.

Shortly after the beginning of this past legislative year, the Committee offered to the State Administration a model comprehensive dangerous drug control act. The Committee had been studying this legislation for approximately two years and at the suggestion of the President of the Society had intensively studied all past legislation, federal statutes and uniform codes, and with legal

assistance prepared a model act in time for presentation to the new Governor shortly after his inauguration. It was known that the Administration had no bill at that time. The reason that there had to be new legislation in this area is that the states must now bring their laws in line with existing statute adopted by the Congress in 1970.

Subsequently, it appeared to us that the Departments of Health and Mental Health, Hospitals, and Retardation had accepted our version which incorporated the penalty structure of the federal law and most of the suggestions of the Uniform Code for states. Up until the present moment, the State of Rhode Island has the second most stringent drug laws in the country.

We wish to emphasize that this legislation was not just another "drug bill". It was the major total revamping of all state laws in this area. The number of the R. I. Uniform Controlled Substances bill is 73-H 6369 (as amended).

We also assumed since we had stimulated consideration of this type of legislation that we would be made aware of any substantial changes that would be made by other divisions of State Government prior to submission by the Administration to the Legislature. Unfortunately, this did not occur. Several areas of the basic bill were modified by a task force heavily influenced by an enforcement philosophy. These additions eventually caused the demise of the legislation for this session.

The Committee subsequently held lengthy discussions with sponsors and Administration personnel while the bill was being processed, pointing out what we felt were negative aspects. These were mainly centered around areas which seemed to be unfair and unjust to accused users by favoring enforcement, unfair to physicians by creating needless paper work, unfair to manufacturers by interposing what seemed to be unnecessary influences on prescribing practices of prescription products, and finally, grossly unfair to patients and citizens in general by invading their privacy. All these inequities were caused by task force modifications of our original model bill inserted without any notification to our Committee and thus changing our proposal to a fairly objectionable bill on summation. All of the discussions were held to no avail.

We had to make a decision on whether to withdraw our support. Our decision, after much consideration, was support the bill despite our objections because of its just penalty structure. We

felt that amendments could later modify the objectionable elements. Immediately after the bill died in the Senate Judiciary Committee, we wrote to the Governor recapitulating the course of the legislation. Again reiterating its importance of our desire to see an equitable piece of legislation which was sensible, effective, and yet fair to all parties. We pointed out the recent fiasco in Massachusetts in which *all* prescription drugs were put under control necessitating special prescriptions. We made a strong suggestion that a small group of the disparate interests be gathered for a conference in an attempt to iron out differences prior to the new legislature. We felt that now was the time to at least discuss the new disparate feelings about the bill. Again it appeared that our suggestion met with approval of the Governor's office of his legislative assistant, Mr. McKenna. We have learned recently, however, that the current strategy is to merely iron out the specific objections of the Senate Judiciary Committee which appeared to be mostly legalistic and to let the bill then be presented as it stands to the Senate for passage. Apparently our concerns, the concerns of the American Civil Liberties Union, and the R. I. Association for Children with Learning Disabilities, concerning the invasion of privacy and the manufacturers' concern about unproductive restriction of trade will only surface in public hearings if they are held. Politically this usually does not result in much real change in the legislation.

We regret the situation has developed and feel that the Society has not been treated fairly in its concerns by the Administration. We realize that the community has necessary enforcement concerns but we feel we have been repeatedly ignored in counterbalancing concern. This is particularly galling because we provided them with the basic legislation.

We also feel the Administration was unrealistic in only providing for one representative of the Society on the Governor's Permanent Advisory Council on Drug Abuse Control which has a total of approximately 23 members.

Governor Noel has always replied very courteously to our communications, but apparently has turned over all drug abuse-related state government involvement to his administrative assistant. We are not too hopeful of any meaningful cooperation.

Apparently, it is well nigh impossible for poli-

ticians to conceive of physicians having anything other than self-enhancing concerns.

* * *

The Committee is much concerned about forged and stolen prescriptions and the misuse of prescribing practice by physicians as a factor in diversion of drugs which can then be abused. No one knows how much a factor this is in the overall Rhode Island abuse picture.

Even if it is eventually shown to be a minor contributor as we suspect we would still welcome a proven control mechanism. The reason we insist on a proven and logistically possible mechanism is that such a method must invariably invade patients' privacy and interfere with the patient-physician relationship. This could only be justified, therefore, if the benefit to society as a whole could be demonstrated by utilizing an efficient and logistically possible procedure.

Prescribing practices are at present regulated under the old Harrison Act and narcotics only are truly controlled. The pharmacist is required to *copy* a narcotic prescription, keep the original on file and send a listing of all his narcotic prescriptions, including physicians' and patients' names, to the Department of Health once a month. Under the control mechanism included in the legislation we are referring to (which was inserted by the task force and not the Society) the paper work aspect is removed from the pharmacist.

The physician fills out a special State prescription form (either supplied *or* sold to him by the State) which would be in triplicate, and be serially numbered. This would be filled out for all Class II drugs including amphetamines, methylphenidate and soon several short acting barbiturates. The physician would retain a copy and the patient would take two of these *special* prescriptions to the pharmacist who would keep one on file for a number of years and send the other carbon copy of the original to the Department of Health, once again *once a month*. The benefit to the pharmacist is obvious in that he would not have to copy the prescriptions. Theoretically, he also might be able to better detect a forged prescription in that all Class II drugs would have to be on a special prescription form. However, obviously these forms could also be stolen and forged so the only benefits really might be the elimination of paper work by the pharmacist — transferring it to the physician.

It is not difficult to understand why the ACLU

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and ACLD object to this aspect because of the data bank features involving non offending patients and even children on psychoactive stimulant medication for learning or behavior problems. We emphasize that under the present law only patients on narcotics have their names on file. In any translation of a federal statute *in toto* all Class II drugs which presently include the aforementioned under the proposed State law would be placed under a triplicate feature and thus, all patients on these additional medications would be filed with the Department of Health. Logistically, this also would obviously multiply the number of prescriptions which would have to be processed by the responsible division in the Department of Health. The Civil Liberties aspect of this type of provision has been considered seriously enough in New York that three judge appellate court is as of this writing considering the case of multiple objectors. The courts have taken it seriously enough to pass it from a lower court to a higher court. So there appears to be a considerable question on constitutional challenge of this type of law. It has been defeated in most states where it has been presented, and at the present time, only four to five states have it on their books.

Some of the manufacturers have a concern that this special prescription would cause physicians to avoid their products.

Our Committee is very concerned about the invasion of privacy aspects and the very definite interposition of the state between the patient and the physician. We concede that there might possibly be some validity to the manufacturers' concern.

It appears to us that in order even to consider this interference that there must be evidence of the effectiveness of such a method. It has been used, as mentioned, in only four states. It has been rejected by most legislatures. The states involved are really unable to determine if it has had any effect on drug abuse in any "hard data" way. We have on file a letter from the new over-all federal agency on drug abuse with a statement by the director that the federal government has no way of having any opinion on this method's effectiveness because apparently of the lack of any valid statistics.

It is rather hard to conceive of the effectiveness of a method which required the submission of prescriptions on a once a month basis bringing about any effect on prosecution of abusers who

forge or steal prescriptions. Apparently, even with the current influx of lists from pharmacists, there is a backlog both in the pharmacies and at the Department of Health. This is on a relatively small scale as compared to what they would receive under the new law. There is no appropriation for the purpose of enlarging staff capability included in legislation. There is no way at present of estimating volume of prescriptions effected but it obviously will be many times what now are processed.

In this State our Administration seems unconcerned about the confidentiality of ordinary patients. It is very difficult for our Committee to condone the invasion of privacy and interference with traditional patient-physician relations which this method entails with the courts seriously questioning its constitutionality. There does not seem to be any indication that this method would be an efficient control mechanism. If it were properly back stopped by staff, it would be inordinately expensive.

All of the above would take place in an effort to control a diversion, the scope of which has only been intimated and not defined. We believe efforts could more logically be directed at known areas of diversion, mainly wholesale transfer, and better police protection of pharmacies.

We intend to present our concerns to key legislative representatives prior to the public hearings. Depending on the response we get, we will then decide whether to recommend continuing support of the legislation or mounting opposition to it. It is ironic that in our neighboring state of Massachusetts, the Governor and Mayor of Boston had turned down \$8 million because it would invade the privacy of addicts.

The concerns about the legislative aspect of drug abuse has taken most of the time of the Committee during the past nine months. Recently we have mailed to Society members a wall poster which invites patients to talk to their physicians about problems of drug abuse in their families. A newsletter for emergency rooms with contemporary data on drug treatment is being prepared. Periodic communications will be published periodically in the Journal.

As we have mentioned, the Committee is very concerned about possibilities of misuse of prescribing practices by physicians in our State. We hope to try and find out whether the situation truly exists, and if so, what the extent of it is,

anw how the Society might help enforcement personnel to cope with this problem.

* * *

The AMA has testified before Congress that it too is concerned with another aspect of the physician-patient drug interface; that is the imprecise prescribing of habituating drugs. They have stated that they will shortly come out with guidelines on barbiturate prescriptions. In the meantime, a special committee of the Medical Society, which has been in existence for the past year, is in the process of drawing up guidelines for the usage of psychostimulant medication in children. Our Committee, over the next several months, will also consider the possibility of offering guidelines in amphetamine treatment of obesity for Society members. We welcome any comments of interested Society members on any subjects which they feel are pertinent in the field of drug abuse.

Respectfully submitted:

JOHN E. FARLEY, JR., M.D.
Chairman

MEDICAL ASPECT OF SPORTS COMMITTEE

The Committee on the Medical Aspect of Sports is very happy to report that a very successful conference was held on July 26 and 27, 1973, at the University of Rhode Island. Registrants from 17 different states attended the meeting. The states represented included Massachusetts, Pennsylvania, New York, Virginia, Rhode Island, Connecticut, New Jersey, New Hampshire, Ohio, Wisconsin, Arizona, Montana, Maine, Colorado, Illinois, Georgia and Michigan.

A total of 130 registrants attended the Conference which was featured by three different talks by the nationally-known coach of Pennsylvania State University, Joseph Paterno. Other well known speakers included Head Trainer Lindsay McLean of the University of Michigan Department of Intercollegiate Athletics; Dr. Royer Collins, Chief of the Sports Department of the Cleveland Clinic; Fred Allman, nationally-known Orthopedic Surgeon on Sports Medicine; Robert Leach, Professor of Orthopedic Surgery of Boston University Medical School; Joseph Torg, M.D., Professor of Orthopedic Surgery at Temple University Medical School, and many other people well versed in sports medicine. The Conference as a whole was very well received with favorable comments being sent to us by just about each and every registrant.

The Conference was considered so successful that we are already thinking about conducting another Conference next year.

Respectfully submitted:

A. A. SAVASTANO, M.D.
Chairman

LIAISON COMMITTEE OF THE MEDICAL SOCIETY WITH BROWN UNIVERSITY

The M.D. Program at Brown University was implemented in January of 1973. Dr. Stanley Aronson serves as Dean of Medical Affairs. A full class of 60 students began their clinical component of the M.D. Program on August 1, 1973.

Approximately 120 part-time, voluntary members were added to the faculty, which makes a part-time clinical faculty of over 20 doctors, which is close to 20 per cent of the practicing physicians in Rhode Island.

In January of 1973, the Brown program of medicine entered into formal affiliation with the Providence Veterans' Administration Hospital. An agreement with Bradley Hospital is also being arranged. Additional associations are now being worked on with the Newport Hospital, the Hussey City Hospital, Truesdale Clinic in Fall River, and the Rhode Island State Health Department.

Twenty members of the Medical Society, from as far abroad as Kingston and Newport, interviewed candidates in the spring of 1973 for admission to medical school at Brown. The RHODE ISLAND MEDICAL JOURNAL now features a regular editorial column, which allows officials of the medical program to share their problems with the medical community and keep it informed.

Three classes of 60 students are now enrolled in the program in medicine. Of the total, 25 per cent are women and 22 per cent are Rhode Islanders. Brown is also discussing early identification of distinguished college freshmen in the pre-medical programs at Providence College and the University of Rhode Island in order to facilitate access to the Brown program in medicine to State residents enrolled at those institutions.

The Liaison Committee is still functioning, but at this time, is more in an advisory role and is attempting to keep the Medical Society informed of changes and developments at Brown. Two members of the Committee appointed by Brown are on leave of absence, and to replace them for the remainder of their absence, Dr. Galletti has ap-

(Continued on Next Page)

pointed Dr. Al Senft and Dr. Stan Aronson to serve in their places.

Respectfully submitted:

RICHARD P. SEXTON, M.D.
Chairman

MATERNAL HEALTH COMMITTEE

The Maternal Health Committee met on August 29, 1973 at 6 p.m. at the residence of Dr. Herbert Ebner. The members present were Dr. Herbert Ebner, Dr. John Wood, Dr. Harold Beddoe, Dr. Jack Beezer, Dr. Stanley Davies, Dr. George Anderson, Dr. William MacDonald, Dr. William Reid, Dr. Bertram Buxton, Jr., Dr. Al Gendreau, Dr. Joseph O'Neill, Dr. John Carey and Dr. John Evrard.

The first item of business was the consideration of appointment of new members to the Committee. It was felt that new members should be added, one from Woonsocket Hospital and one from Pawtucket Hospital; Dr. William MacDonald will ascertain the nominal head of the Obstetrical Department at Woonsocket and Dr. John Evrard will contact Dr. Ed Horan to determine the chief at Pawtucket. They will make their recommendations to the Chairman.

The Chairman read a letter from the Rhode Island Medical Society regarding the handling of rape cases. He said that all hospitals had been contacted and advised to follow the procedures for treating victims as recommended in the American College of Obstetrics and Gynecologist Technical Bulletin No. 14, 1970 on "Suspected Rape".

The Committee discussed the reporting of birth certificates and fetal death certificates on abortions. Great objection to this procedure by several members was voiced when this involved spontaneous abortions of less than 20 weeks gestation. Doctor Buxton pointed out that the ruling had always been in effect but was not followed. With therapeutic terminations, the Committee felt that reporting was necessary, but it should be in an anonymous fashion. An Ad Hoc Committee of Dr. John Carey, Dr. Bertram Buxton, Jr., and Dr. John Evrard was appointed to meet either with Dr. Joseph Cannon or Dr. Alex Burgess to resolve the problem. Doctor Buxton suggested, perhaps it would be wise for the group to speak to Mrs. O'Hara in Vital Statistics to learn of the inherent problems before seeing Doctor Cannon or Doctor Burgess.

Protocols on the deaths presented were discussed

and though seemingly adequate often delete essential material. The Committee unanimously voted that in the future the interviewer would request from the attending physician and hospital a photocopy of the entire record. This record would be under the direct surveillance of the Chairman of the Committee after it was acquired and would be totally destroyed or returned to the hospital if that were their desire.

There were two maternal mortality cases in Rhode Island since the last meeting approximately one year ago. Detailed summaries have been prepared.

The first was a direct obstetric death. The diagnosis was placenta accreta with hemorrhage as the cause of death.

The second case was a woman whose cause of death was listed as thrombotic thrombocytopenic puerpera. It was classified as an indirect obstetric death.

Respectfully submitted:

STANLEY D. DAVIES, M.D.
Chairman

PHYSICIANS AND CARRIERS WORKMEN'S COMPENSATION COMMITTEE

The Physicians and Carriers Workmen's Compensation Committee has not had any cases come before it during the past year and there are no cases waiting to come before it.

Respectfully submitted:

WALTER C. COTTER, M.D.
Chairman

MEDICAL ECONOMICS COMMITTEE

The Committee has been informed that the Blue Cross-Blue Shield rates for 1973-74 for the subscribers to the Medical Society have been reduced for the first time in a number of years.

There have been inquiries from members of the Society requesting that the Medical Society program include Blue Shield Plan 100. We have polled the committee, a majority of whom favor offering the Plan 100 in the group package. The Plan 100 will be made available on November 1, 1973 provided 50 per cent of those presently covered through the Society elect the coverage.

Respectfully submitted:

KENNETH LIFFMANN, M.D.
Chairman

(To be Continued in January, 1974 Issue)

PERIPATETICS

(Concluded from page 487)

and JOHN T. MAZZEO, Surgery-Emergency Room Service.

* * *

Appointed to the new position of Chief of the Division of Pulmonary Medicine at St. Joseph's Hospital is JAMES F. VALICENTI. Doctor Valicenti began his new duties November 1. His responsibilities will encompass respiratory therapy and pulmonary function testing.

* * *

Three Miriam Hospital physicians are involved in a program at St. Maria Goretti Women's Club in Pawtucket. LOUIS and Mrs. FUCH presented a travelogue on Tunisia; WILLIAM WEXLER discussed the hazards of smoking, and MELVYN JOHNSON'S clinical staff presented a family group therapy program on family communications.

* * *

Appointed to the active staff of the Division of Psychiatry at The Miriam Hospital has been DAVID J. KASS. Doctor Kass will work part time at The Miriam Hospital and part time at Butler Hospital.



MOTILITY DISTURBANCES OF THE ESOPHAGUS

(Concluded from page 499)

REFERENCES

- ¹Code CF, Schlegel JF: The physiological basis of some motor disorders of the oesophagus. In Proc Symposium Surg Physiol Gastro-Intestinal Tract, 1962. Edinburgh, Royal College of Surgeons, 1963. Pp. 1-19.
- ²Ingelfinger FJ: Esophageal motility. *Physiol Rev* 38:533-84, Oct 58
- ³Clagett OT, Payne WS: Surgical treatment of pyloric diverticula of the hypopharynx: one-stage resection in 478 cases. *Dis Chest* 37:257-61, Mar 60
- ⁴Ellis FH Jr, et al.: Cricopharyngeal myotomy for pharyngo-esophageal diverticulum. *Ann Surg* 170: 340-9, Sept 69
- ⁵Ellis FH Jr, Olsen AM: Achalasia of the Esophagus. Philadelphia, W. B. Saunders Company, 1969
- ⁶Ellis FH Jr, et al.: Fundoplication for gastro-esophageal reflux: Indications, surgical technique, and manometric results. *Arch Surg* 107:186-192, Aug 73
- ⁷Ellis FH Jr, et al.: Surgical treatment of esophageal hypermotility disturbances. *JAMA* 188:862-6, 8 Jun 64



AMERICA'S NO. 1 CRISIS

(Concluded from page 511)

It is only in this way that life can be justified, despite its pains and disappointments. To think well of myself for having more money or a bigger car or bigger house or a nicer neighborhood than my friends is all very well while it lasts, but it vanishes as soon as one of my friends goes one better. But the satisfaction of having done what I thought right can last for life and depends on nobody but myself. Thus, the moral ideal I here affirm is one which puts emphasis on self-discipline and acceptance of standards; the social system I hope for is one which provides encouragement and opportunity for these vital elements. If we promote these essential ingredients for a life worth living, the moral crisis we face today may be a turning point for the better rather than for the worse.



ONE SENTENCE ESSAY

Most of us are sensible enough to realize that socialized medicine means turning doctors into politicians and politics into a medical specialty.

... Congressman Jerry L. Pettis of California.



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MEDICAL PERIODICALS OF RHODE ISLAND

(Concluded from page 506)

the district societies was first published in the 1905 *Transactions*. The six district societies were: Kent, Newport, Pawtucket, Providence, Washington, and Woonsocket.⁸²

The 1905 Report of the Committee on the Library reported that the total number of bound volumes was approaching 20,000.⁸³ The report also contained a statement that Miss Grace Dickerman had been appointed as Assistant Librarian to the Society. Actually, her work as an attendant had started in 1903 and was to continue until 1965.⁸⁴

The final volume of the *Transactions* was the eighth, published in three parts from 1910 to 1912 and consisting of 311 pages. At the quarterly meeting held on March 3, 1910 Doctor George D. Hersey presented a paper on "Some of the Earlier Anatomists with Exhibition of Their Work".⁸⁵ Books by Vesalius and Eustachius, among others, were on display.⁸⁶ In the same issue appeared the report by Robert F. Noyes on "The Proposed Building for the Rhode Island Medical Society."⁸⁷ The report covers the actions taken by the Society on this matter between the years 1908 and 1910.

The 1911 issue of the *Transactions* contained "The Laying of the Corner-Stone of the Library Building, June 1, 1911" and included Doctor Frank L. Day's address.⁸⁸ The Annual Address, delivered on the same day by G. Alder Blumer, was titled "A Plea for the Medical Library".⁸⁹

Addresses related to libraries continued to appear. At the Centennial Meeting of June 13, 1912 Abraham Jacobi presented "The Educational Value of Medical Societies and Libraries".⁹⁰ Of particular interest in the final volume of the *Transactions* was the paper by Frank T. Fulton and Carl D. Sawyer titled "The Treatment of Syphilis with Ehrlich's Salvarsan, with Observations on its Effect upon the Serum Test and upon the Spirochetes".⁹¹

CONCLUSION

This paper has been a descriptive study of the first official journal of the Rhode Island Medical Society. Between the years 1859 and 1912 eight volumes of the *Transactions of the Rhode Island Medical Society* were issued. Essentially, it was the foundation and growth of the Society that promoted the development of this journal.

Later parts in this series will examine in similar detail the other medical journals of Rhode Island

including the current one. For now, though, the following quotation appears particularly appropriate to the paper in hand:

"There is a dead medical literature, and there is a live one. The dead is not all ancient, the live is not all modern. There is none, modern or ancient, which, if it has no living value for the student, will not teach him something by its autopsy."

REFERENCES

A list of the references for the three installments may be obtained from the Rhode Island Medical Society Library



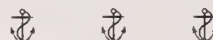
SOUTHERN NEW ENGLAND CANCER GROUP

(Concluded from page 513)

SUMMARY

The Southern New England Cancer Group started in April 1972, one year prior to this report, with a small nucleus of participating hospitals and physicians for the purpose of improving the care of the cancer patient in southern New England. It has grown to include over 60 member physicians and 17 participating hospitals. Continuation of the Southern New England Cancer Group is contingent upon federal funding programs, and inasmuch as these have not yet been delineated by the Government, the future of the Southern New England Cancer Group is uncertain. It is our opinion that the program has demonstrated the usefulness of a regional, inter-hospital approach to the management of the cancer patient. Although the program is no longer federally funded, it will, if feasible, be continued as a permanent medical service in Rhode Island.

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Volume 56, 1973

**Published for the Rhode Island Medical Society
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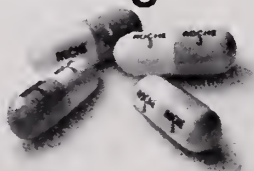
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Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

The New York Academy of Medicine

DUE IN TWO WEEKS UNLESS RENEWED
NOT RENEWABLE AFTER 6 WEEKS

[illegible]

